

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

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In the extreme South, the great city of New Orleans is still inaccessible by railroads. So also is Mobile, another very important place.—Among the most important works in the Southern States in progress, and whose construction may be said to be indispensable to the harmony of the railroad system of the country, and absolutely necessary to secure to the business men and other travellers all the facilities they need, is the great line throughout Central Virginia, Eastern Tennessee, and North Western Georgia, through Alabama and Mississippi in the direction of Mobile and New Orleans. The completion of this great line will contribute a direct and unbroken route from these cities to the extreme North-east; taking all the great central and Northern commercial towns in its route. Connecting with this, at or near Chattanooga, is the Memphis and Charleston road, extending West to Memphis, a distance of nearly 300 miles; and a work of first rate importance, whether considered in its local aspects, or as one of the future great arteries of the commerce of the country. The Alabama and Tennessee is the proper prolongation of this great thoroughfare to Mobile; and the New Orleans, Jackson, and Great Northern with its Eastern connections, to New Orleans. The line from Mobile to the mouth of the Ohio, a distance of 500 miles, is a work of greater national importance; as, in connection with the Illinois Central, it will form a part of an unbroken line between the Gulf and the Northern Lakes, a distance of nearly 900 miles;—between regions of perpetual heat and of winter's cold; and a line which will traverse belts producing all the articles necessary to human comforts, or forming the basis of all commerce. The road which is to connect this great line with New Orleans is the Mississippi Central which traverses that State from North to South, and connects with the Mobile and Ohio at Jackson, Tennessee, and with the New Orleans, Jackson and Great Northern, at Jackson, Mississippi. Both of the last named roads, are to be connected with Nashville by lines already in progress. To complete the Southern system, Nashville should be connected with the Ohio, at the mouth of the Wabash, and with Louisville. The work necessary to the former is in successful progress. The Louisville and Nashville road seems to make way but slowly. A work of such

general and local importance surely ought not to flag. With the exception of this last, all these roads which are to form the connections indicated are in that stage of progress which promises their early completion. When this shall be accomplished, the railroad system of the country will not only be co-extensive with the greater part of its territory; but adequate in the main to the wants of our people.

Pacific Railroad.

In our last number we described the general structure of the country lying between the Rocky, and Sierra Nevada ranges of mountains, and from well-known hydrographic laws, showed that an absence of rain, and consequent sterility, must be the results. We also showed that by the operation of the same laws, the eastern slope of the Rocky mountain ranges must be equally destitute of water, and consequently equally sterile. We also introduced the testimony of various travellers, proving the presence of those phenomena which are the necessary inferences of ascertained conditions. The testimony upon this branch of the subject we now continue.

It is well known that Col. FREMONT twice crossed the Great Desert from the western boundary of Missouri to California, in the years 1843 and 1844. In his tour he passed completely around the basin of the Great Salt Lake, and traversed other extensive portions of the desert, under the direction of experienced guides. In his journal he says, "The interior of the Great Basin, as far as explored, is a succession of sharp ragged mountain ranges and naked plains. Sterility is the absolute characteristic of these plains. No wood, no water, no grass. No animals, except hares. No birds are seen in the plains, and few on the mountains. But few Indians are found, and these in the lowest state of human existence, living not even in communities, but in the elementary state of families, and sometimes a single individual by himself." In another place he says: "From what I saw of the country, sterility is its prominent characteristic." In describing his journey from Walker's Pass to the *Vegas de Santa Clara*, a distance of five hundred and fifty miles, he says: "The country is little better than a sandy desert," "a region of loose, heavy sands," "hot and yellow," in which the traveller "suffers from

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New York, Saturday, January 13, 1855.

Railroads that are Still Wanted.

The railroad facilities which we possess render some that we have *not* only the more necessary and desirable. Throughout the Northern and Middle States, every important and wealthy town lies upon a railroad; and nearly every great thoroughfare is traversed by one. Quebec, the *ultima Thule* of northern progress and in winter formerly the most isolated city on the continent, has just been reached by the iron way. The railroad is also making its way slowly to the extreme limit of its *eastern* progress in Nova Scotia. Till that boundary is reached, the satisfaction felt at the contemplation of the Eastern system, will always be marred by its want of *completeness*. Its eastern station must stand on the shore washed by the same ocean that bounds the western progress of European roads, and which must be the connecting link between the systems of the two Hemispheres.

an intolerable thirst," "where the heated air seems to be entirely deprived of moisture." "A desolate and revolting country, where lizards were the only animals, and the tracks of lizard eaters the principal sign of human beings." When traversing the eastern vein of the Great Basin, he was informed by a Christian Indian that "the country directly across to the Great Salt Lake had repulsed by its sterility all attempts to penetrate it." — When traversing, subsequently, its eastern limits, he states that "fertility of soil and vegetation does not extend far into the Great Basin," that it is "called a desert, and what he saw of its sterility may be its prominent characteristic." "Humanity there appears in its lowest form," subsisting on "seeds, insects and roots." "The rabbit is the largest animal," and "the wild sage the only fuel and timber, and the only covering often for the feet and legs in cold weather."

Bryant, who passed centrally through this region, from the Great Salt Lake, by the way of Humboldt or Mary's river, to California, thus speaks of it:

"A fine white sand, impalpable almost as ashes, mingled with which is a scoriaceous gravel, in some places soft and yielding to the hoofs of our mules, in others baked and compact almost to the hardness of brick, are the leading characteristics of the soil, if soil it can be called." When at the distance of ninety miles, the scene is represented as one of "dismal and oppressive solitude," "no voice of animal, no hum of insect disturbing the tomb-like solemnity. All was silence and death. Like the other elements sustaining animal and vegetable life, the winds seemed stagnant and paralysed by the universal death around." A vast plain of 70 or 80 miles in width, which they were compelled to cross, was "utterly destitute of water and of vegetables, or any sign that shrub or plant had ever existed above its snow-like surface." In other places, wild sage, grease-wood, and a few shrubs of smaller size, for the most part leafless, "were the only vegetations, except at long intervals a little grass, these mostly dry, and this only in the immediate vicinity of the few springs to be met with, whose water was often too brackish for use." At the distance of two hundred miles, after taking an extensive view from the summit of a mountain, he states "that no words can describe the awfulness and grandeur of this sublime desolation." At about three hundred and thirty miles there appeared "little or no variation in the general character of the country and its productions." At 450 miles no improvement. The nearest mountains present the same rugged and barren aspect.

At 575 miles he states that "everything around is sufficiently cheerless and desolate to depress the most buoyant temperament. The sable and utterly sterile mountains, the barren and wild plain, incapable of sustaining either insect or animal, presents a dreariness of scenery that would be almost overpowering in its influences, but for the hope of more pleasing scenes beyond."

Farnham who crossed the upper portion of the Colorado valley, from St. Vrain's Fort to Salt Lake describes it as a "desert or arid plains and minor mountains," the "great grave of vegetation," — The face of the country, even in the valley of Green river is a "dry barren and undulating plain." He could find nothing in nature from which to derive a pulse of pleasure, nothing "save the vastness of desolate wastes, the tombs of the washings of the floods." The course of the Grand River, to the point where he crossed it, was nearly due west. From thence, according to Kelly, a man who was familiar with its course and that of the Colorado, it "continued in a west by north course for one hundred and sixty miles where it breaks through the Anahuac ridge." The cliffs at this point on both sides are "several hundred feet high and over hanging within them is a series

of cascades which roars like Niagara, when the river is swelled by the freshets of June." After passing this point it moves with a "dashing, foaming current" to where it meets with Green River and forms the Colorado of the west. "From the junction of these branches, the Colorado has a general course from the north-east to the southwest, of seven hundred miles to the Gulf of California. Four hundred of this seven hundred miles is one almost unbroken chasm with perpendicular sides hundreds of feet in height, at the bottom of which the waters run in continuous cascades."

"The country on each side of its whole course is a rolling desert of brown loose earth, on which the rains and dews never fall."

Farnham's statement is also confirmed by the testimony of Dr. Lyman, who travelled in 1841 from Santa Fe to Upper California. For the first one hundred and fifty miles to the Rio San Juan, the pasture and water were both good, upon the mountain sides and valleys. After crossing the San Juan in about lat. 38° N., and continuing along the Grand to the Green River tributaries of the Colorado, he states, that "the country becomes generally sterile and broken in every direction, by deep ravines with perpendicular banks opposing almost insurmountable obstacles to the traveller's progress, compelling him to search many days before he can find a feasible passage."

He states that the water in nearly every instance west of the Colorado to the California mountains, a distance of seven hundred to eight hundred miles, "is either very brackish and slimy or so excessively saline as to have, in many instances, a fatal effect on animals and men." In some few instances good water was found. Sometimes the vast barren plains were destitute of any water, having hardly a blade of grass, or a square mile of surface! Occasionally wild sage was found, and this and the stems of equally naked bushes, were the only food for animals. Occasionally, also a few diminutive "canes" and sand grass were found in the dry beds of rivers. "Over these dreadful wastes scathed of God, was scattered the wild squash which only served to tantalize the perishing traveller with the remembrance of fruitful fields and pleasant homes."

Thornton, who passed through a portion of this barren waste, speaks of the "desertion of moisture," describes its "sterility and dreariness as fearful, as though a strange curse were brooding over the whole scene." — "A country which has nothing of a redeeming character." "It was enlivened by the murmur of no streams, but was a wide waste of desolation, where even the winds had died."

Stansbury gives a similar account of the country upon his route. So does Sitgreaves, who traversed the desert lower down, in latitude 34. It was with the greatest difficulty that the animals of his expedition could be kept from dying from thirst. He describes the whole country as desolate beyond all former description; all of it giving evidence of recent volcanic action, and the few feeble streams descending from the mountains, soon losing themselves in the sands at their base.

The general appearance of the entire region between the two great ranges of mountains already described, is of itself the most complete and satisfactory evidence of the absence of rain.

One of its most remarkable features is the aspect of *newness* which it presents. Rain is the great disintegrator of the earth's surface. Where it does not fall, the lapse of ages produces no perceptible change upon the earth's surface; consequently portions of the great American Desert present the same appearance they did ten thousand years ago. It seems not to have been disturbed since the warring forces of nature laid down their arms. This warfare would appear to

have ended but yesterday. The yawning chasms, the blackened hills, the angular and jagged masses of rock piled up in endless confusion, the heaps of scoria glistening as if it ran from the furnace of yesterday, the vast plains unenlivened by a single specimen of organic or animal life, all bear witness of the external action of those terrific agencies, which now quietly repose in the bowels of the earth. Over the scene of their warfare, through the agency of milder forces, no veil has been thrown. It remains, and always will remain, intelligible alike to the learned and unlearned, a record of a great crisis in the earth's history.

The amount of drainage of a country is good evidence of the amount of rainfall. This rule applied to the Colorado, the great river of the country lying between the Rocky and Sierra Nevada mountains, shows that the fall of rain upon it is equal to only about one-seventieth of the fall in the Mississippi basin. At the place where General Kearney crossed it, below the mouth of the Gila, its breadth was only 1,500 feet, its greatest depth in the channel was four feet, and its greatest flow only 1½ miles the hour. As the territory drained by this river exceeds 200,000 sq. miles, it is estimated by competent authority that the rate of flow indicates a discharge equal to only one-seventieth that of an equal area in the Mississippi valley. Yet Mr. Benton tells us that the Colorado is the *best watered valley in the world*, and to be the theatre of a State equally great in resources as Ohio, or Pennsylvania, or Illinois!

We think the above descriptions will convey a distinct and true idea of that portion of our continent lying between the 99th degree of longitude, and the western slope of the Sierra Nevada, a distance of at least 1200 miles. This distance measures the *breadth* of the sterile region. Its extent north and south is not fully ascertained, but there is no doubt it traverses, in this direction, the entire territory belonging to the United States. — Within the boundaries described, *irrigation* is absolutely essential to the cultivation of the soil. The rivers depend for their existence, in the summer season, upon the melting of the snows upon the lofty summits of the mountain ranges. Where they can be used, which is only rarely the case, the soil, which is sufficiently fertile, produces bountifully. Most of the rivers, however, traverse either deep canons or high precipitous banks. Not two per cent of the whole territory can probably be made available for purposes of agriculture. Mr. Bartlett, the well-known boundary commissioner, states that the proportion of the arable, to desert land, on the southern route, is not one per cent of the whole; and we see no reason why the route proposed by Mr. Benton is more favorable in this particular.

Up to the time of the last trip of Col. Fremont, the universal testimony, including his own, fully sustained what must have been the inferences and conclusions of every tolerably well-informed person upon the subject of hydrographic laws. But it became necessary in the *providence* of Mr. Benton, that this untoward aspect of nature should be instantly and completely changed. Accordingly, Mr. Fremont is dispatched anew to the scene of his former travels and investigations. At the touch of his magic wand, the whole scene is changed. The desert puts on a robe of fertility and beauty. At his bidding, the rocks even sand

forth abundant fountains of water. The mountains fade away at his approach; and where stern winter held uninterrupted sway, smiling summer is perpetually secured. The valleys are exalted, and the hills laid low. The crooked way becomes straight. The swamps and morasses become firm land. All doubts and difficulties not only disappear, but what before was regarded as a problem, for which no solution had appeared even to the most sanguine, is shown to be but a pastime, compared with works already achieved. A new creation bursts upon our astonished vision, compared with the strangeness and brilliancy of which, all that we read in the "Arabian Nights" becomes the dull and prosaic experience of ordinary life.

That this new revelation is the purest fiction, no sane or well-informed man, will for a moment doubt. Natural law, and the concurrent testimony of unimpeached witnesses, must continue to outweigh mere assumption, no matter with what emphasis it is uttered. But Mr. Benton's oration carries suspicion on its very face. He tells us that he has made the subject a study for *thirty* years, assisted by a *turn* for geographical inquiry. Such a long course of study must have made him acquainted with the descriptions of all who have written upon the territory under discussion, and the personal narratives of a great many who have traversed it. Why are not some such authorities quoted? Why is not more particular reference made to Mr. Fremont's *earlier* travels, performed under conditions which enabled him to pay particular attention to all the leading characteristics of the country? Why are the results of the last journey of this gentleman across the continent almost solely relied on by Mr. Benton to sustain his new hypothesis? But attaching the utmost credibility to his witness, he is *not* a *competent* one.

No man with a proper respect for himself, or a proper appreciation of the difficulties which he assumes to solve so readily, would have ventured to express an opinion based upon the knowledge developed by his last journey. Mr. Fremont's party was not competent to make scientific observations. If it were, the rapidity of his march would have rendered impossible the taking of observations with a degree of accuracy sufficient to determine the practicability of a route for a railroad. Without questioning the integrity of his motives, his statements are simply incredible. It is well known that barometrical observations, unless compared and corrected by numerous other observations made in the vicinity, are not to be relied upon. No experienced man would depend upon isolated ones, made at long distances, and upon a flying march, as proving that an elevation could be overcome by a practicable grade: consequently, all the material of which Mr. Benton built his lofty and spacious structure, melts into empty air.

We cannot accept Mr. Fremont's discoveries, of a mild and equable climate at dead of winter in the passes of the Rocky Mountains elevated 10,000 feet above the sea. If he is correct, the existence of most extraordinary phenomena is shown. On the other hand, the universal testimony of experience, and the well known operations of natural laws teach a different result. We must, without further comment, accept the latter testi-

mony as paramount, till this new discovery shall receive further confirmation.

But Mr. Fremont in his statement, from which Mr. Benton quotes so largely, does not pretend to give the *results* of any observations. We have a plenty of assertion, without a particle of proof. His whole statement is by far too vague and undefined to be used as testimony in matters requiring mathematical accuracy. Besides:—We have good reason for believing that the examinations of Gunnison will show the famous Coochetteepee pass to be entirely impracticable; that the ascent for a long distance is at an angle that would render the operation of a railroad entirely out of the question; and that a tunnel to avoid the ascent is impossible at any reasonable cost, even in a work of the magnitude of a railroad to the Pacific.

But Mr. Benton himself seems to distrust Fremont; for he is supplanted, as Chief Engineer of this new route, by the best of all *engineers*—the *buffalo*! What a farce for a Senator of thirty years, to enact. Will not the *buffalo* climb a hill having a greater ascent than say, 120 feet to the mile? The *buffalo* Chief Engineer of the Railroad to the Pacific! When the *buffalo* is Chief Engineer of an enterprize, what must be thought of the judgment of those who follow him as a *leader*?

Mr. Fremont pretends that he has found a *new* pass through the Sierra Nevada range, one so gentle and low that he could not tell when he entered, or when he left. We hope he has found one, for none other has yet been demonstrated. But experience teaches us that we must take his discoveries of passes with great allowance. For a time, *Walker's* pass was with him, and with Mr. Benton, the *gate* to California. All know how often Mr. Benton apostrophized its beauties and its excellence. Yet careful experience has exploded all his high wrought descriptions. It has been shown by the theodolite to be entirely unpracticable. This fact rendered it incumbent in Mr. Fremont to discover a *new* one. He sought it where, according to all analogy, one ought *not* to exist. He may have been successful; but with his past experience, and with the probabilities derived from well known physical laws against him, we must be allowed to remain incredulous till further testimony is adduced.

With the *motives* of Mr. Benton we have nothing to do. We simply join issue upon the facts of the case. We leave it to the public to say in whose favor facts incline. We must express our mortification, however, that a man of Mr. Benton's age and means of information should make the exhibition of himself he has. We are still more mortified that audiences composed, as they certainly have been, by our most influential citizens, should take fictions as solid realities. It displays a degree of ignorance of the physical features of our continent which we should have supposed to have been impossible. Where such ignorance exists, bold assumption may be swallowed down as Gospel truth. But such success is short lived. The ignorance which secured it, is at last dispelled, and when the dupes come to see clearly, indignation at the deception practised upon them creates a tenfold indignation toward the impostor, who, stripped of his ill-gotten laurels, is degraded to his true position.

Subscribers wanting *indices* for 1854 are requested to apply for the same at once.

Commerce of the New York Canals.

We copy from the Albany *Evening Journal* the following statement of the Receipts at Tide Water, in which is embraced the quantity and estimated value of the leading articles brought down the Canals to the Hudson River in the years 1853 and 1854. This statement embraces the reports from the New York, Albany, West Troy and Waterford Collectors' Offices, and exhibits at a glance the total receipts and value of each article left at the Hudson River:

STATEMENT of Property left at Tide Water on the Erie and Champlain Canals, showing the quantity during the years 1853 and 1854.

THE FOREST.

Articles.	1853.	1854.
Fur and Peltrey, pound.	188,205	67,840
Product Wood.		
Boards and Scantling, 1,000 feet.	667,516,928	522,478,855
Shingles, M.	38,182	25,836,744
Timber, 100 c. feet.	5,284,316	4,456,089
Staves, pound.	158,163,100	182,061,491
Wood, cord.	10,500	16,270
Ashes, pot and pearl, barrel.	31,808	26,026
Total of the Forest, tons.	1,340,261	1,132,921

AGRICULTURE.

Product of Animals.		
Pork, barrel.	105,000	141,846
Beef, do.	95,531	53,068
Bacon, pound.	19,953,400	18,826,306
Cheese, do.	10,090,200	5,875,169
Butter, do.	5,170,000	2,354,193
Lard, Tallow and Lard		
Oil, pound.	11,550,100	16,803,210
Wool, pound.	5,998,700	3,129,387
Hides, do.	940,500	201,975
Total product of Animals, tons.	59,187	58,968

Vegetable Food.

Flour, barrel.	8,068,742	7,249,458
Wheat, bushel.	9,432,657	8,523,794
Rye, do.	155,788	225,382
Corn, do.	3,193,002	12,876,434
Corn Meal, barrel.	2,336	173,417
Barley, bushel.	2,497,360	1,949,279
Oats, do.	4,034,206	5,353,121
Bran and ship stuffs, p'd.	38,306,260	17,014,526
Peas and Beans, bushel.	74,654	170,745
Potatoes do.	489,918	626,489
Dried fruit, pound.	655,680	603,421
Total Vegetable Food, tons.	869,110	790,188

All other Agricultural Products.		
Cotton, pound.	469,400	733,812
Unmanufactured Tobacco,		
pound.	4,685,900	6,684,056
Hemp, pound.	963,500	2,267,924
Clover and Grass Seed, do.	1,217,200	943,018
Flax Seed, do.	532,500	131,851
Hops, do.	16,700	914,013
Total all other Agricultural Products, tons.	8,942	5,813

MANUFACTURES.		
Domestic Spirits, gallon.	3,805,723	2,088,721
Oil Meal and Cake, pound.	16,925,400	18,622,755
Leather, do.	7,307,100	6,217,273
Furniture, do.	469,800	770,941
Bar and Pig Lead, do.	171,700	850,778
Pig Iron, do.	8,607,200	11,915,564
Bloom and Bar Iron, do.	21,538,000	18,676,715
Castings and Iron Ware, pound.	2,745,800	1,786,878
Domestic Woolens, do.	150,700	305,672
Domestic Cottons, do.	1,047,700	1,810,575
Domestic Salt, do.	8,601,900	8,805,087
Foreign Salt, do.	....	1,248,490
Total Manufactures, tons.	52,817	48,129

MERCHANTIZE.		
Nails, Spikes and Horse-shoes, lbs.	7,482,000	4,573,412
Iron and Steel, do.	1,247,500	9,342,043
Railroad Iron, do.	1,100,000	1,763,841
Flint Enamel, Crockery & Glassware, do.	357,100	332,885
All other Merchandise, do.	16,102,300	13,574,161
Total Merchandise, tons	12,683	15,774

OTHER ARTICLES.		
Live Cattle, Hogs and Sheep, pound.	289,450	167,520
Stone, Lime and Clay, do.	153,348,000	187,511,277
Gypsum, do.	8,269,500	15,199,939
Mineral Coal, do.	30,274,066	111,171,940
Copper Ore, do.	2,378,000	3,575,190
Sundries, do.	141,285,020	201,984,814
Other Articles, tons	167,897	234,782
Total tons	2,505,797	2,465,886

STATEMENT		
<i>Of the estimated value of Property left at Tide Water on the Erie and Champlain Canals, and the average value of each article, during the years 1853 and 1854.</i>		

THE FOREST.		
Articles.	1853.	1854.
Fur and Peltrey	\$229,006	\$85,337
Product Wood.		
Boards and Scantling	10,680,270	8,315,426
Shingles	137,887	124,674
Timber	880,833	927,958
Staves	759,183	882,320
Wood	49,875	88,245
Ashes, pot and pearl	869,630	959,549
Total of Forest value	\$13,615,634	\$11,513,509

AGRICULTURE.		
Product of Animals.		
Pork	\$1,496,250	\$1,729,921
Beef	758,516	524,681
Bacon	1,795,806	1,648,298
Cheese	882,892	618,405
Butter	827,200	563,016
Lard, Tallow and Lard Oil	1,212,760	1,718,788
Wool	2,759,402	1,091,835
Hides	117,562	31,234
Product of Anim'l's, value	\$9,850,388	\$7,920,628
Vegetable Food.		
Flour	\$17,677,791	\$11,434,807
Wheat	12,356,780	7,047,570
Rye	137,872	278,770
Corn	2,287,031	10,648,306
Corn Meal	6,447	774,292
Barley	2,010,380	2,188,158
Oats	1,815,392	2,676,567
Bran and Ship Stuffs	306,450	191,222
Peas and Beans	67,188	250,621
Potatoes	274,354	407,182
Dried Fruit	52,454	50,359
Vegetable Food, value	\$36,992,139	\$35,947,854
All other Agricultural Products.		
Cotton	\$53,981	\$71,949
Unmanufactured Tobacco	1,077,765	1,191,496
Hemp	62,628	156,756
Clover and Grass Seed	85,204	84,235
Flax Seed	10,650	4,587
Hops	6,012	322,699
Total Agriculture value	\$48,138,767	\$44,626,405

MANUFACTURES.		
Domestic Spirits	\$856,288	\$773,865
Oil Meal and Cake	211,567	385,879
Leather	1,096,068	1,292,865
Furniture	49,829	77,094
Bar and Pig Lead	9,444	58,581
Pig Iron	86,072	182,709
Bloom and Bar Iron	430,760	461,108
Castings and Iron Ware	96,108	60,024

Domestic Woolens	185,630	271,166
" Cottons	272,402	378,155
" Salt	37,848	64,186
Foreign	80,936	
Total Manufactures, value	\$8,281,508	\$4,031,008

MERCHANTIZE.		
Nails, Spikes and Horse-shoes	\$222,960	\$208,904
Iron and Steel	31,812	412,043
Railroad Iron		40,374
Flint Enamel, Crockery and Glassware	35,710	30,181
All other Merchandise	4,880,690	4,625,026
Total Merchandise, value	\$5,127,590	\$5,816,528

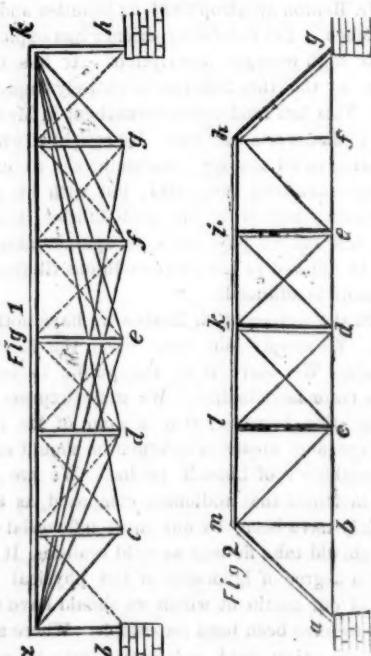
OTHER ARTICLES.		
Live Cattle, Hogs and Sheep	\$7,183	\$5,026
Stone, Lime and Clay	280,022	902,008
Gypsum	17,865	30,400
Mineral Coal	75,685	461,510
Copper Ore	368,590	798,190
Sundries	2,825,700	4,038,686
Other Articles, value	\$3,524,545	\$6,285,820
Total value	\$73,688,044	\$78,797,064

(For the American Railroad Journal.)

BOLLMAN'S PATENT IRON BRIDGE.

A kind of structure thus designated having attracted a degree of public attention, the question of its value and originality becomes a legitimate subject of investigation, for any who take sufficient interest therein.

It appears that Wendell Bollman of Baltimore, has obtained a patent for a sort of mongrel bridge, something between a Suspension and a Truss bridge, and partaking in a measure of the character and qualities of both. Its general characteristics are shown in Fig. 1; and, as there represent-



ed, it is more properly termed a *Truss bridge*. But remove the top thrust piece (*a k*), and the five posts that support its intermediate portions; and substitute guys, or back stays, running back from *a* and *k*, and anchored into the earth, to secure those points from being drawn inward by the suspension rods (*a c*, *a d*, &c.) it becomes strictly a *Suspension bridge*; differing from *Suspension*

bridges as commonly constructed, but in principle, precisely like the plan shown in plate 5, of my Treatise on Bridge Building printed in 1847, some years, it is believed, previous to the date of Bollman's patent.

Moreover, the method of supporting the transverse beams, or main floor timbers of bridges, by an independent pair of braces, or *suspension chains*, running from each beam to the abutments, or to fixed points above the abutments, (as at *a* and *k*, Fig. 1,) is fully discussed in the first ten pages of the book; and direct allusion made to the device of introducing a rigid body between the points of suspension (as *a* and *k*.) to prevent those points being drawn towards one another by the suspension chains or rods. The only feature in the plan before us, then, which is not fully pointed out and considered in my book, is the introduction of the posts at *c*, *d*, *e*, *f*, *g*, to sustain the weight of the thrust piece (*a k*.) a very natural and obvious device, which could hardly fail of occurring to one having a long slim body to sustain in an elevated and horizontal position.

Why, then, were not the posts introduced, and the plan completed and presented, in the book referred to? Because it was fully and conclusively demonstrated, that the main principle and idea involved was utterly worthless, as it regarded Truss bridges. Not meaning that a safe and useful bridge cannot be made in this way; but that it can only be done at a much greater expense than is required to make an equally safe and useful bridge, on other plans and principles.

Thus much for the *novelty* of the plan. With regard to its utility and economy, the following exposition was prepared with a view to publication, something more than a year ago. But the publication was deferred, in consequence of some expectation that the intelligence and good sense of those most interested in the matter, were such as to preclude any necessity for a public exposition.

But subsequent developments have proved such expectations not well founded; since this plan of bridge; small as its real merits are, has met with some favor from parties occupying prominent stations. It is deemed, therefore, not inappropriate to give the exposition a publication at this time; and I here present it as prepared at the period referred to.

BRIDGES AND BRIDGE PLANS.

My purpose, in this article, is to point out and demonstrate the relative merit of certain plans of Truss bridges, which are now receiving attention from engineers and others engaged in constructing, or procuring the construction of bridges.

I will first remark, that a *Truss bridge* is one in which the carriage way, flooring, or platform, is sustained by two or more pieces of frame-work called Trusses, extending throughout the length of the span; the parts of which are so arranged and connected as to produce no action on the abutments, except a vertical pressure equal to the weight of the structure and the superincumbent load. This is the distinguishing feature between *Truss bridges* and *Arch bridges*, the latter producing not only a vertical, but also a horizontal action upon abutments; as in the case of stone arches which tend to press the abutments outward. *Suspension bridges* are mostly sustained by inverted arches, (convexity downward,) which

act by tension, and their tendency is, to draw the abutments inward, which tendency is prevented by guys running back from the abutments, and firmly anchored in the earth.

There is little diversity of practice as to the mode of constructing the platform or flooring of bridges, all being composed of beams, joists and planks, nearly in the same manner. But in the Trusses used to support the flooring, a good deal of variety is observable; and the relative merits of different plans of Truss bridges depend mainly on the strength and economy of the Trusses employed in such plans respectively; and it is obvious that the plan of Truss which affords the requisite strength, or supporting power with the least amount of material, other things the same, is most economical and best.

In all the varieties of plan, Trusses are composed mainly of an assemblage of long pieces, distinguishable into two classes, namely, *Tension* pieces and *Thrust* pieces; the former being used to tie or bind together those points of the truss which the load of the bridge tends to force asunder; and the latter, to brace or hold asunder those points which the load tends to force towards one another.

The other parts of the truss, such as pins, keys, nuts, &c., being short and comparatively unimportant, as to amount, need not be taken into account in this investigation; and it is manifest that the comparative economy of two plans of truss, is nearly indicated by the compound ratio of the number, length, and cross-sections of the long pieces required in each. As to the tension pieces, the cross-sections are required to be proportional to the forces acting on those pieces; and the same is true as to the thrust pieces, where the forms are similar, and there are like ratios between the lengths and diameters of the pieces.

In this comparison, I shall assume for the present that these conditions are fulfilled, and that the comparative economy is inversely as the number, lengths, and cross-sections of the several tension and thrust pieces in each plan respectively; that is, I shall multiply the length of each tension piece by the greatest stress to which it is liable, and take the sum of the products so obtained, as the representative of material required to form those pieces; and multiply, in like manner, the lengths of the thrust-pieces by the forces to which they are liable, and take the sum of the products as the representative of the amount of material required to form the thrust-pieces. These two representative sums together will indicate, to a near degree of approximation, the relative economy of the plans respectively.

Figure 1 is intended to represent a bridge-truss resting on two abutments (*b* and *h*), and, in order that this truss may support a given weight (*w*) at each of the points (*c*, *d*, *e*, *f*, *g*) *ab* being equal to *bc*, or equal to 1-6th *bh*, it is manifest that a tension strain equal to 5-6th *w* $\sqrt{2}$ must be exerted on *ac*. Also a tension on *ad*, equal to 4-6th *w* $\sqrt{5}$, a tension on *ae* equal to 3-6th *w* $\sqrt{10}$, a tension on *af* equal to 2-6th *w* $\sqrt{17}$; and on *ag* equal to 1-6th *w* $\sqrt{26}$. Now, the length of the piece *ac*, calling *ab* the unit of length, is equal to $\sqrt{2}$, the length of *ad* equal to $\sqrt{5}$, of *ae* equal to $\sqrt{10}$, of *af* equal to $\sqrt{17}$, and of *ag* equal to $\sqrt{26}$; consequently the tension of these pieces multiplied by their respective lengths, and the products added together,

will be 5-6th *w* $\times 2$ + 4-6th *w* $\times 5$ + 3-6th *w* $\times 10$ + 2-6th *w* $\times 17$ + 1-6th *w* $\times 26$, equal to 20*w*.

The sum of the products for *kg*, *kf*, *ke*, *kd* and *kc* must, of course, be just the same, making 40*w* for the sum of the products of all these oblique tension pieces, or the representative quantity for the amount of material required to construct those parts.

Now, the action of these tension-pieces, tends to draw the points *a* and *k* inward, or towards one another; hence, the necessity of the thrust-piece *ak* to brace them apart; and the action on each end of this piece is equal to the aggregate horizontal effects of the stress exerted on the five tension pieces connected with each end of the piece *ak*, that is, equal to 5-6th *w* for the horizontal effects of the stress on *ac*, 4-6th *w* $\times 2$ for *ad*, 3-6th *w* $\times 3$ for *ae*, 2-6th *w* $\times 4$ for *af*, and 1-6th *w* $\times 5$ for *ag*, together equal to 35-6th *w*, and this multiplied by 6, the length of *ak* gives a product of 35*w*, as a representative of the amount of material required in the thrust-piece *ak*.

There are two other thrust-pieces, *ab* and *kh*, required to prevent the weights at *c*, *d*, &c., from drawing the points *a* and *k* down towards *b* and *h*. The action on these two pieces together equals 5*w*, and their length being a unit, their representative products will, consequently, be 5*w*, making, together with the representative for *ak*, as above seen, 35*w* + 5*w* = 40*w*; the same as obtained for the tension pieces.

The above enumerated parts or pieces are all that are required to withstand the actual determinate forces resulting from the load. Still, they form by no means a stable and secure structure, without posts at each of the points *c*, *d*, *e*, *f*, *g* to sustain the weight of the long thrust-piece *ak*, and keep it in line; otherwise it would require an enormous size to give it the necessary stiffness.

Also ties or struts from *b* to *c*, and from *g* to *h* are necessary, or something equivalent; otherwise a slight preponderance would sway the truss lengthwise, either to the right or left. Therefore, the above figures fall considerably short of a full and true representative of the amount of material required for such a truss, to make it permanent and reliable. In the truss that I now proceed to consider, these incidental tendencies are counteracted by parts provided to sustain the actual determinate forces produced by the load, which will appear in the representative figures about to be determined.

Let Fig. 2 represent a truss in which *ab* equals *bm*, equal to 1-6th *ag*, with a weight equal to *w*, at each of the points *b*, *c*, *d*, *e*, *f*; single lines indicating tension and double lines, thrust-pieces.

The greatest stress produced by these weights on *ab*, *bc*, *ef* and *fg*, equals 2*w* $\sqrt{2}$, and their length being unity, their representative products together equal 10*w*. The stress of *cd* and *de* equals 4*w*, and their representative products together equal 8*w*.

The tension of *bm* and *hf* equals *w*, and their products together, 2*w*. The tension of *mc* and *eh* equals 10-6th *w* $\sqrt{2}$, and the lengths equal $\sqrt{2}$, hence, their products together equal 6-2-3th *w*. The tension of *ld* and *di* equals *w* $\sqrt{2}$, lengths, $\sqrt{2}$ and products together, 4*w*. Tension of *ck* and *ke* equals *w* $\sqrt{2}$, length $\sqrt{2}$, and products together equal 2*w*.

The sum of these representative products

equals 32 2-3d *w*, which is the representative of the amount of material required for tension pieces.

The thrust piece *kd* is liable to a maximum stress of $\frac{1}{2}w$; and *bc* and *ie*, to a force equal to *w* on each; and the length of each being unity, the representative products for the three pieces together equal 2*w* $\sqrt{2}$. The greatest thrust on *am* and *gh* equals 2*w* $\sqrt{2}$; the lengths $\sqrt{2}$, and the products together equal 10*w*. The forces acting on *ml* and *ih*, equal 4*w*, and the length being unity, the products equal 8*w*; while the forces acting on *lk* and *ki* equal 4*w*, and the two products equal 9*w*, making the sum of the representative products for thrust pieces, equal to 29*w*.

Now, these are all the parts (except connecting pins, &c. of comparatively small amount) which are required in this plan, to make a good and stable truss, like those of several bridges now in use, with the most satisfactory results; whereas, the above estimate in reference to Fig. 1, although representing all the parts on which determinate forces are exerted by the load, only provided for an incomplete and unstable structure or truss, such as no competent and judicious engineer would think of building, without the addition of vertical posts at the points *c*, *d*, *e*, *f*, *g* to sustain the thrust stringer *ak* together with some suitable provision for giving longitudinal stability. In some iron bridges now constructing in this city, on this principle, to be erected on the Western Division of the Erie Canal, cast iron posts are to be inserted of some 700 lbs. each, and ten in number, for a bridge of about 90 feet; making an amount of cast iron, not at all estimated in the above calculation, sufficient to form all the thrust pieces necessary for two substantial trusses for a common road bridge of a like span, if constructed on the most judicious and economical plan. In addition to this, diagonal tie-rods are to be introduced in each pannel of the trusses, (as shewn by dotted lines in Fig. 1) requiring for the two trusses ten to twelve hundred pounds of wrought iron, which serves but little useful purpose, except to prevent the trusses from swaying endwise. But this mostly, as well as a considerable portion of the iron in the posts, is chargeable to injudicious practice, in arranging and proportioning the work, rather than to the inherent faultiness of the distinguishing principle of the plan of truss.

We see, then, from what precedes, that the truss on the plan shewn in Fig. 1, requires more material in the long tension pieces than is required in the plan (Fig. 2) to sustain the same load, in the ratio of 40 to 32 2-3th, and more material in thrust pieces, in the ratio of 40 to 29*w*, being an average of 80 to 62 1-6th, or near 29 per cent. more material to form an incomplete and unstable truss on the one plan, than to form a perfect and stable truss on the other; and if we take the former plan, as arranged for the use of the Erie Canal in certain cases, and the latter, as arranged and practiced on by me, the difference in favor of the latter would be increased to 40 or 50 per cent.

The same in substance was publicly pointed out year ago; and there is no apology at this day for such reckless waste of means, upon plans of structure so obviously and decidedly inferior in point of economy.

It appears, then, that this famous "Bellman

Truss," the invention of which Mr. Vose considers "the great step of the age," in the advancement of the science and practice of bridging, is the mere fossil of one of Whipple's discarded principles, dug up, and probably considered original and valuable, by Wendell Bollman, and here attempted to be thrust into the first rank in the order of merit, among iron truss bridges applicable to openings of 200 feet. Whereas, the plan demonstrated to be 25 to 50 per cent. more economical, is attempted to be restricted to half that length of stretch.

If there are any material errors in what precedes, I hope they will be promptly pointed out.

ALBANY, 7th Jan'y, 1855. [S. WHIPPLE.

Railroad Relief.

To the Editors of the Washington Sentinel:

GENTLEMEN:—A communication in a recent number of the Richmond *Enquirer* in relation to the remission of duties on railroad iron, has induced me to examine the action of the General Government on that subject. The following are the facts:

1. By the act of July 14, 1832, (Stat. at Large, vol. 4, p. 604,) railroad iron of all kinds, including rails, spikes, bolts, chains, &c., was made *duty free* if laid within three years from the time of importation. This law was general in its provisions, and continued in operation some eleven years. The policy originated in 1831, and, before it was terminated in 1843, by the tariff passed by the Whigs in 1842, about *seven millions of dollars* were refunded from the Treasury of the United States to the railroad companies.

2. After the passage of the act of July 1, 1838, duties were charged on spikes, pins, &c., at the same rates as they were charged on other iron; but *rails* remained *duty free* until March 3, 1843. (See U. S. Laws, vol. 5, p. 551.)

3. During the whole eleven years in which railroad iron was *duty free*, in every case where a company was unable to lay down its iron within three years from the date of its importation, an application to Congress obtained special relief. A reference to the Journal of the House, in three several cases, shows that they were passed *nem. con.* and without even a call for the yeas and nays. I presume the rest were passed the same way; all parties and all sections of the country acquiescing in the policy. I notice that several of these special acts were for the benefit of Pennsylvania Railroads.

From the Treasury table before me I am able to trace \$4,408,919 20, and see for whose benefit the duties were refunded, but the balance I cannot trace; from this table, it seems, that of the \$4,408,919 20, Pennsylvania, New York and New England obtained some *two millions and three-quarters*, and of this latter sum Pennsylvania obtained \$1,044,875 24. Virginia \$166,022 99. South Carolina \$210,381 92. Georgia \$152,938 80. How the balance of the near seven millions of dollars refunded from the Treasury of the United States was distributed among the several States I do not know; it is fair to suppose that it was divided as was the four millions; and, if so, it went principally to Pennsylvania, New York and New England, and helps to account for their numerous roads and large wealth.

4. By the Tariff Act of 1842 (see U. S. Statutes at Large, vol. 5, p. 551,) a specific duty of \$25 per ton was laid upon railroad iron; but this was not to take effect until the 3d of March of the following year.

5. In 1846, by the act of 30th of July, a Democratic Congress reduced the duties of \$25 per ton upon railroad iron to 30 per cent. upon its actual cost.

From this history of the legislation of Congress upon railroad iron, we see that for the first eleven years it was exempted from all duties, if laid down within three years from the date of its importation. If laid down afterwards, special acts refund-

ed from the Treasury the sums paid therefor. During the succeeding four years (from 1842 to 1846,) a specific duty of \$25 per ton was imposed, and during the next nine years (from 1846 to 1855,) there has been collected a duty of 30 per cent. upon the cost of imported railroad iron—eleven years free from duty, thirteen years subject to duty.

It will readily occur to the intelligent reader that the principle involved in making railroad iron *duty free*, and of refunding duties years after they had been paid, has been sanctioned by all parties, and been quietly acquiesced in, if not directly approved, by the greatest and the best men of the country in public life, during one of the most brilliant periods in American history—from 1831 to 1843.

The general act of 1832, and the numerous special acts, were passed during the Presidencies of ANDREW JACKSON, MARTIN VAN BUREN and JOHN TYLER.

In Congress were the following remarkable men, all of whom, so far as I have noticed, acquiesced in, and most, if not all, of whom directly sanctioned the principle of making railroad iron *duty free*. Messrs. Calhoun, Clay, Woodbury, Webster, Buchanan, R. J. Walker, Marcy, Bell of Tennessee, Clayton, Boyd, McDuffie, Polk, Livingston, Silas Wright, Tazewell, W. R. King, Abbot Lawrence Berrian, Crittenden, Whittlesey, Cave, Johnson, Governor Troup of Georgia, Sevier Governor Dickinson of New Jersey, B. W. Leigh, Hugh L. White, Caleb Cushing, General Hayne of South Carolina, John Quincy Adams, P. P. Barbour, Wayne, &c., &c.

Not one of these great men, of the various parties in Congress, seemed to have seriously assailed the plan of encouraging the construction of railroads by making the rails *duty free*. General JACKSON and his successors directly approved the laws, general and special; and the Treasury's returns show that of all the States, Pennsylvania and New York obtained from the Treasury, under those laws, by far the most money. Under the workings of those laws making iron rails *duty free*, many, if not most of the leading Railroads of Pennsylvania, New York and New England, were constructed in whole or in part. To aid in building those great railroads that have done so much towards making Baltimore, Philadelphia, New York and Boston what they are, *iron for railroad purposes was made *duty free* during an unbroken period of eleven years*. And yet, at that very time, and during the whole eleven years a specific duty of thirty dollars per ton was levied upon iron used for all *other* than railroad purposes in every part of the United States.

As forcibly showing how far Congress had actually gone to encourage the building of railroads in the States wealthy enough in those days to construct them, we mention that the duty paid into the Treasury on iron laid down on what is now a portion of the great railroad connecting New York and Boston, was refunded from the Treasury of the United States by *special act of Congress*, (and apparently without opposition from any quarter,) *some five years after the importation of the iron by the Company!* It is a matter of wonder that New England, New York and Pennsylvania have most population and manufactures, commerce and wealth, when we see that they took advantage of that liberal legislature of Congress, and built at an early day, that kind of modern avenues, and many of them, which enrich all communities who are able to construct them? Their brilliant success has caused extensive imitation, and with like success. And I hope to see the day when railroads will reach alike the Rio Grande, at its head waters, and the Red River of the North, in latitude 49°—when they will extend to the Bay of San Francisco, to the mouth of the Columbia, and to Puget's Sound, in far off Washington Territory.

The foregoing hasty historical account of Congressional legislation in aid of railroad communications, will, I hope, furnish an insight into the reasons that cause the Southern and Western States to hope that they will by allowed privileges

the enjoyment of which has had so much to do with the prosperity that we now have the happiness to witness in the Northern and Middle States; it explains somewhat the instruction of Virginia and other States, and shows why they directed Senators to vote to make Railroad iron *duty free*.

Henderson and Nashville Railroad.

The above is the name of a railroad in process of construction, and extending from Henderson, on the Ohio river, nearly opposite Evansville, Ia., through Hopkinsville, to the State line of Tennessee, whence it extends to Nashville, the capital of that State. The length of the road, within the State of Kentucky, is about 95½ miles, and in Tennessee 48 miles; making the whole line 143 6-10 miles in length. The part traversing the former State was chartered under the name of the "Henderson and Nashville," and that in Tennessee, by the name of the "Edgefield and Kentucky" Railroad. When completed, the two roads are to be united, and form one interest, under the former designation.

The road is a continuation of the great lines extending from the South-east to Nashville; whence, by the above route, a connection is formed with the Ohio river, at the lower end of the Wabash valley. Most important connections consequently already exist, securing to the road when opened an extensive *through* business between the South-east Atlantic cities, and the great agricultural region of the North-west. The local business also promises to equal that of most of our Western roads. In addition to the ordinary "crops" of grain, hogs, &c., the road runs, for several miles in Kentucky, through a rich coal field, which lying near the surface in inexhaustible quantities, and of superior quality, secures a large revenue to the company from the outstart.

The following is the estimated cost of the road,—

From Henderson to State Line 95½ miles,	
For Right of Way, Grading and preparing for superstructure	\$1,054,949 91
For Superstructure and turn-outs ..	1,185,800 00
From State Line to Edgefield,	
For Grading, &c.	\$1,025,316 00
" Superstructure	567,900 00
" Depots and Equipments	400,000 00

\$4,188,965 91

Equal to \$29,136 per mile. A contract has been entered into, at the above rates, with parties, and payable one-third in Cash and County Bonds, one-third in Stock, and one-third in the Company's Bonds.

Their resources are stated to be as follows:

From Henderson to State Line.	
Individual Subscriptions	\$325,000 00
Contractors' do (earned) ..	30,000 00
Right of Way granted, &c.	15,000 00
Todd County Bonds	100,000 00
Christian " "	150,000 00

From State Line to Nashville.	\$620,000 00
Individual Subscriptions	300,000 00
Davidson County Bonds	200,000 00
State Subscriptions \$10,000 per mile.	480,000 00

\$1,600,000 00

Leaving a deficiency of nearly \$2,600,000, to be met by Stock subscriptions and Bonds. The report expresses a hope that from the city of Nashville and several counties which have not yet come forward to aid the work, additional subscriptions will be received.

The following are the estimated receipts of the road-way business.

Live stock, in tons. 30,100
Grain & tobacco do 98,490
Coal in do 166,666
Sundries do 43,085

Total 338,841
Paying as freight \$730,969 00
Way passengers 101,408 00
Through do 249,711 00
Mails and expresses 30,000 00

Total receipts \$1,112,088 00
Deduct for working expenses 50 per cent 556,042 00

Leaves as net profits \$556,041 00
Or over 12 per cent. on a cost of \$4,200,000.

The length of the road, according to the latest surveys, as already stated is 143.6 miles. The length of an "air-line" between the termini, is 127.5 miles. In Kentucky the route is described as being very favorable for construction. In Tennessee, on account of the crossing of several streams, and the rolling character of the country, it will be rather more difficult of execution. Along the whole line materials for construction are abundant and easily accessible. A single tunnel three-quarters of a mile in length, will be required.—

The curvature of the road is favorable, there being less than half a mile of as short radius as 1,000 feet. The following is a table of the grades on the road:

Rate per mile, Level.	Distance. Miles.
	17.96
0 to 10.....	23.88
10 to 20.....	22.95
20 to 30.....	12.93
30 to 40.....	30.68
40 to 50.....	18.10
50 to 60.....	12.90
60 to 70.....	4.20
Total.....	143.60

Northern Ogdensburg Railroad.

The Charter authorizing the construction of this road was granted by the Legislature of New York in the year 1847. By it the capital stock of the company was to consist of \$2,000,000, in 40,000 shares of \$50 each. The estimated cost of the road—117 miles long—was \$2,829,669, besides Rolling Stock and Buildings. The work was put under contract in the beginning of 1848, and operations in grading &c., commenced as soon after as the season would permit. On the 1st October, 1850, the entire line was opened for traffic of all kinds, although it was in a very unfinished state; as considerable difficulty had been experienced with the contractors in fulfilling their agreements. By the 1st May, 1851, the cost of the work amounted to \$3,641,426, which included \$694,708 as Interest, loss on sale of Bonds, and Rolling Stock. At this time the subscriptions to the Stock were \$1,468,739 And the Funded Debt was 1,500,000 Leaving a Floating Debt of 672,687

As the capital stock subscribed amounted to less than \$1,600,000, the stockholders had authorized issues to be made of 1st and 2d Mortgage Bonds, to meet the increased expenditures of the undertaking. The former of these, dated July 1st, 1849, were issued to the extent of \$1,500,000; which fall due in 1859. The whole of these had been sold, at date of last report, except \$900.—

The second Mortgage, dated April 1st, 1851, is also payable in ten years, and is limited to \$3,000,000. These are convertible into stock at par, on or before January 1st, 1860. Of these there had been sold* \$2,568,000, besides \$467,500 placed as collateral security with different parties. Of the first issue \$10,000 running only five years have already matured, but are unpaid.

The earnings and expenses of the road, from the date of opening till the 30th of June last, have been as follows:

	Gross Earnings.	Transportation Expenses.	Net Revenue.
In 1850*..	\$70,453.37	\$45,548.74	\$24,904.63
1851...	325,475.29	176,916.93	148,558.36
1852...	480,137.04	284,289.96	195,847.08
1853...	548,281.76	356,679.74	191,602.02
1854†...	232,386.64	193,871.50	38,515.14

* 3 months. † 6 months.

The General Account of the Company, at 30th June last, stood thus,—

RECEIPTS.
Stock Assessments..... \$1,611,527 22
Bonds, 1st Mortgage \$1,499,100 00
" 2d " 2,569,400 00
\$4,068,500 00
Less Discount..... 551,767 62
8,516,732 38
Traffic Department..... 1,663,126 88
Notes Payable and Miscellaneous.. 503,093 13
\$7,294,479 61

EXPENDITURES.
Cost of Road..... \$4,720,662 81
Working Expenses..... 1,087,431 59
Interest on Stock Assessments..... \$89,388 39
Interest on Loans..... 378,782 43
" Bonds..... 626,028 00
1,039,148 82
Notes and Bills Receivable..... 302,491 82
Steamers and Barges..... 78,792 74
Telegraph, Materials, and Cash on hand..... 65,951 88
\$7,294,479 61

The present Liabilities of the Company of all kinds are.....	\$6,183,120 35
Cost of Construction \$4,720,662 81	
Other property and credits..... 199,138 95	
	4,919,801 76

Balance not applied to Construction \$1,263,318 59

This Balance consists of
Interest on Bonds over net Earnings \$50,232 76
" Stock and Loans..... 418,120 82
Discount on Sale of Bonds..... 551,767 62
Debts due and Materials paid for..... 248,097 44

\$1,263,318 59

The company seem to have had a series of unusual difficulties to contend with. In the original estimates for construction &c., the figures were put far too low, the expenditures having almost doubled the amount at first believed to be sufficient for that purpose. In raising funds, great difficulty has been experienced in negotiating their bonds, which, it will be observed, has been done at a very serious sacrifice. A large expenditure was necessary for the construction of works at Rouse's Point, and for steamers on the St. Lawrence. The rates for Freight and Passenger travel were put at such a very low figure as is con-

* The vote to limit the sale of these to \$3,000,000 was passed at last Annual Meeting, subsequent to the issue as above.

sidered will hardly pay expenses. The effects of the climate on rails and sleepers are said to be severely felt. The kinds of freight and the irregularity attending it have operated injuriously. The way travel is inconsiderable. Finally, the unnecessary expenditure attendant upon a road which required not to be first-class added to its indirectness and river competition, have prevented the company from declaring a dividend as yet, and must do so for some time to come.

Finances of Michigan.

According to the new Constitution of this State, the Legislature meets only bi-ennially.—

The receipts &c., for 1853 and 1854 are stated in the Governor's Message to have been,—

Balance in Treasury 30th November;	
1852.....	\$116,407 23
Receipts for 1853.....	655,667 86
" 1554.....	610,699 97
Outstanding Warrants.....	147 98
	\$1,382,923 04

The Expenditure for 1853 was..... \$396,449 39

The Expenditure for 1854 was..... 483,469 57

829,918 96

Leaving, on 30th November last, a Balance in Treasury of..... \$553,004 08

The funded and fundable debt of the State not due, 30th November, 1853, was..... \$2,339,892 07

Amount due Trust Funds..... 466,956 26

Total..... \$2,806,348 33

The funded and fundable debt of the State not due, 30th November, 1854, was..... \$2,531,545 70

Amount due Trust Funds..... 681,699 73

821,245 43

The Specific Taxes for 1853 were.... \$105,374 40

 " 1854 " 113,255 20

As there is no provision made for applying the balance on hand to the reduction of the debt, the Governor recommends that measures for that purpose be adopted.

The Port Huron and Michigan Railroad, was chartered in 1847 with a capital of \$2,000,000.— As it is stated that \$8,000,000 would be required to complete the road, the right of increasing their stock to that amount is also recommended. The Governor also proposes the repeal of an enactment made in 1853, limiting the capital of mining and other corporations to \$500,000, in twenty-five dollar shares. The operations of this law he considers to have been injurious, in preventing the investment of capital in the Upper Peninsula, where the mining business requires large outlays to be successfully prosecuted. But he believes that "it would be wise policy to prohibit by law the circulation within the State, of bank bills or notes of a less denomination than five dollars." The amount of Swamp Lands granted to the State by the General Government are stated to be 5,879,211 acres, worth from two to four millions of dollars. The terms of the grant require the application of the proceeds to the drainage of these lands. The Governor recommends the sale of them at nominal prices, to actual purchasers, for that purpose.

The census returns of 1853 show the population of the State to have been 409,374; and the taxable property for the same year \$120,862,474.

Notice is taken of the St. Mary's Canal, which it appears should have been finished in 1854,

but for the early setting in of winter. The cost will be nearly double the original estimate; and the work is pronounced by competent judges to be the best of the kind.

American Railroad Journal.

Saturday, January 13, 1855.

Back Numbers.

Those in want of back numbers, to complete their volumes for binding, must send in their orders at once, as the supply is limited. We can furnish full bound volumes for several years past; also a few full sets for the whole period of twenty-three years.

Should any of our friends have in their possession the volume of 1857, or the three first numbers of that year which they are willing to dispose of, we will be glad to purchase them, to complete sets.

Maps.

We regret to announce the delay of the delivery of our new maps to Subscribers. We had promised them with this number, but our order for paper was delayed at the mill for three weeks, which will cause a corresponding delay in their delivery to our friends. Meanwhile, let those who have not paid up to January, remit at once and secure the map gratis.

Those wishing to purchase the pocket edition of our new map, will find it in Philadelphia, at the office of THOMAS M. CASH, No. 80 South 4th St., and in Boston, at Messrs. IDE & DUTTON'S. Price \$1.00.

Johnson's Routes to the Pacific.

This valuable work on the Pacific Railroad is still in print. Price one dollar.

Lyon's Tables of Excavations and Embankments.

We have on hand a few copies of this compendium for engineers. Price \$1.50.

Orders for any of the above publications will be received at this office. The usual discount will be made on orders from the trade.

Aid to Railroads.

From what we can learn, there appears to be a disposition on the part of Congress to extend some relief to the railroad interest of the country, now almost completely prostrate from the extraordinary stringency in monetary affairs. The relief, if given, will probably be in the nature of a *draw-back* on duties paid within a certain period. As a matter of equity, this period should embrace about three and a half years, say from January 1, 1853, to July 1, 1856. The proposed draw-back would not more than compensate for the increased cost of roads, due to the increased price of provisions, labor and money; and would simply place those companies who have laid rails in it, on a par with those constructing their roads under more favorable conditions.

As the law imposing the duty will not be touched, the question of *protection* cannot properly be raised. We presume, however, that the owners of rail mills will oppose no objection to a measure which, while it cannot prejudice them in any manner, is just the measure to set their works in motion, by relieving from its present paralysis, that interest upon which they must mainly depend for

support. As the time for the operation of the proposed measure is to be limited, it cannot be argued that it will unduly stimulate the construction of railroads.

We cannot see how any objection can be urged against *policy* of the proposed measure. As a matter of equity, the parties who have, at such vast sacrifice, filled to overflowing the National Treasury, and have conferred inestimable benefits upon the whole country, certainly ought to be considered, when the desired relief can be given without inconvenience to Government, and without injury to any other interest.

We refer the reader to our article upon another page.

Decline of Securities in 1854.

The following table will show the difference in prices of some of the leading stocks sold at the Brokers Board in this city, at the commencement and close of the past year:

	Jan'y 1854.	Dec. 1854.
United States 6, 1867.....	120 $\frac{1}{2}$	118
Ohio 6s, 1860	106	97
Eric Incomes	97 $\frac{1}{4}$	100
Hudson River R. R. 1st Mortgage.....	108 $\frac{1}{2}$	95
Erie Railroad shares.....	79 $\frac{1}{2}$	39 $\frac{1}{2}$
New York and New Haven R. R.	102	35
Harlem R. R.	55 $\frac{1}{2}$	28 $\frac{3}{4}$
Norwich and Worcester R. R.	59 $\frac{3}{4}$	35
Stonington R. R.	65 $\frac{1}{2}$	60
Reading R. R.	79	72
Michigan Central R. R.	107	83
Panama R. R.	96	75
Long Island R. R.	30 $\frac{1}{4}$	24
Cumberland Coal Co.	35 $\frac{1}{4}$	48 $\frac{1}{2}$
Canton Co.	26 $\frac{1}{4}$	19 $\frac{1}{2}$

The following will show the decline of some of the leading Western stocks.

	Jan'y 1854.	Dec. 1854.	Decrease.
Little Miami.....	110	80	30 per ct.
Cin. Hamilton & Dayton.....	106	60	46 "
Wilmington & Zanesville.	75	35	40 "
Cincinnati & Chicago	38	5	33 "
Dayton & Western.....	75	15	60 "
Covington & Lexington.	53	30	33 "
Central Indiana.....	80	45	35 "
Mad River & Lake Erie.	80	37	43 "
Cleveland & Pittsburgh.	86 $\frac{1}{4}$	—	"
Maysville & Lexington.	47 $\frac{1}{2}$	nothing	47 $\frac{1}{2}$ "
Peru & Indianapolis	65	25	40 "
Columbus & Xenia.....	106	80	26 "
Central Ohio.....	75	60	15 "
Cincinnati & Indianapolis 66	42	24	"
Indianap. & Bellefontaine 68	40	28	"
Eaton & Hamilton	65	25	40 "

Debt of Syracuse.

The entire indebtedness of this city is \$75,000, of which \$5,000 are payable in five equal annual payments, on the 1st of November each year.— The balance, \$70,000, is funded in 10 bonds of \$7,000 each, datee June 1st, 1854, and payable as follows:

Dec. 1st, 1857	\$10,000
" 1858	10,000
" 1859	10,000
" 1860	10,000
" 1861	10,000
" 1862	10,000
" 1863	10,000

The interest upon these several bonds falls due on the 1st June and Dec. of each year.

The city has no permanent income, except from taxation.

The charter contains authority to raise annually by taxation, sufficient to pay expenses, and that part of the city debt which falls due.

North Western Railroad of Pa.

The above road connects with the Pennsylvania Railroad near Blairsville, west of the Alleghany mountains, and proceeds in a north-westerly direction to the State Line, from which place it is to be continued to Cleveland by the Cleveland and Mahoning road. The route is very direct between the termini, and runs through a rich agricultural and mineral region. Its principal aim, however is to secure to Philadelphia the *Lake Trade*, which its supporters maintain can be easily accomplished, on account of the shortness and unbroken character of the route. From the report of the Chief Engineer for the last year, it appears that the company have had, in consequence of the monetary pressure, to suspend operations to a considerable extent lately, except at that part of the line between Blairsville and Freeport, and on two sections near the town of Butler. The expenditure for construction is to be limited in future to \$20,000 per month. Some changes have been made, as to the line of road and the character of the work, which it is determined shall be *first class* in every respect, consequently increasing the original estimates of cost.

Up to the 1st Dec., 1854, the receipts from all sources had been \$121,000 00 And the expenditures, to same date .. 169,356 51

Balance due contractors 48,356 51

This would be increased, it was expected, at 1st January, 1855, to \$56,000 of which \$33,000 were to be retained as security, leaving \$23,000 to be provided for, which, it was believed, would be met by the second instalment of Philadelphia city Bonds, as part subscription to the work.

Gold Statistics.

The receipts of gold for the past three years have been as follows:

	1854.	1853.	1852.
As Mani- fested at San Fran- cisco.	As deposit- ed at Phila- delphia.	As deposit- ed at Phila- delphia.	As deposit- ed at Phila- delphia.
January	\$1,729,000	\$4,962,000	\$4,162,000
February	3,837,000	3,549,000	3,010,000
March	3,365,000	7,534,000	3,892,000
April	4,519,000	4,766,000	3,091,000
May	4,497,000	4,366,000	4,356,000
June	4,981,000	4,544,000	6,889,000
July	4,035,000	3,491,000	4,200,000
August	4,315,000	4,512,000	2,675,000
September	4,335,000	3,025,000	4,554,000
October	4,502,000	4,452,000	4,140,000
November	4,500,000*	3,630,000	7,260,000
December	4,500,000*	4,445,000	3,386,000

Total.... \$48,065,000 \$53,226,000 \$51,045,000
By pass's... 4,806,000*

\$52,871,000

*Estimated.

EXPORT OF SPECIE FROM NEW YORK.

	1854.	vs.	1853.
January	\$1,846,000		\$784,000
February	580,000		1,121,000
March	1,466,000		592,000
April	3,475,000		767,000
May	3,651,000		2,162,000
June	5,168,000		3,264,000
July	2,922,000		3,901,000
August	4,548,000		1,148,000
September	6,547,000		1,244,000
October	3,359,000		4,758,000
November	3,538,000		3,886,000
December	Nil.		3,113,000

Total..... \$37,100,000 \$25,115,000

The following statement will give the comparative amount of receipts and exportation of gold for the two past years.

	1854.	1853.
Coined at Philadelphia.	....	\$53,276,000
Bars, not Minted.	....	2,600,000
Manifested, California.	\$48,065,000	....
By passengers.	4,806,000	....
Foreign Coin, N. Y.	2,000,000	2,500,000
" other ports	2,000,000	2,000,000
Branch Mints.	2,000,000	2,284,000
Total.	\$58,871,000	\$63,660,000
Decreased Income.	4,789,000	
Total.	\$63,660,000	
EXPORT.	1854.	1853.
From New York.	\$37,100,000	\$25,115,000
From Boston.	8,000,000	5,700,000
Total.	\$45,100,000	\$30,815,000
Increased.	....	14,285,000
Total outward movement.	....	\$45,100,000
Inward, as above.	....	58,871,000
Retained in country, 1854.	....	\$13,771,000
Retained in 1853.	....	31,220,000
Retained in 1852.	....	30,480,000

Cumberland Valley Railroad.

The first estimated cost of this road—49 miles long—was \$564,064, which included a double track grading, and single track laid with flat rails. That of the equipment was \$78,000, making a total of \$642,064, or \$13,100 per mile. The estimated receipts were \$254,617 50. The estimate was made in 1835, at which time the route of the contemplated road was on the line of trade between Philadelphia and Pittsburg. The actual cost of the road, when completed and equipped, was \$690,800. The work of construction commenced in January, 1836; and in December, 1837, it was completed and ready for travel.

The original location of the road runs through the heart of the Cumberland Valley—a rich limestone and highly improved section of country—from the Susquehanna river, opposite Harrisburg, to Chambersburg, in a south-westerly direction. By subsequent legislation, the company were authorized to build a bridge over the Susquehanna and connect with the Pennsylvania canal, making the entire line 52 miles long. It now unites, at this point, with the Pennsylvania, the Harrisburg and Lancaster, and the Lebanon Valley Railroads—the last being now in course of construction.

The only considerable grade on the road, and running but a mile in length, is one of 41 feet to the mile, ascending from the valley of the Susquehanna river.

The work thus constructed was not remunerative, and paid no dividends; its receipts being scarcely sufficient to pay expenses and interest on a debt of about \$275,000 which had gone into construction. To this was to be added the debt created by the erection of the bridge, making the entire indebtedness of the company \$423,215, beside the stock which was \$472,000.

In 1849, the Board resolved to re-construct the road, and put upon it a heavy T rail. The holders of the debt agreed to advance \$400,000, a sum considered sufficient for that purpose. By an act of the Legislature, the company was re-organized, by the creation of a "preferred" stock equal to the debt and the amount necessary to re-construct

the road. The work was commenced and finished in 1850.

The company are now in possession of a first-class railroad 52 miles long, with a bridge across the Susquehanna 4,000 feet in length. The whole, including Real Estate and all appurtenances, cost \$1,212,911 83. The capital of the company stands thus,—

First Preferred Stock	7,200 shares	\$360,000 00
Second "	7,050 "	352,500 00
Old Stock	7,740 "	387,000 00
" " held by the company	1,700 "	85,000 00
		\$1,184,500 00
Floating Debt.	....	28,411 83
		\$1,212,911 83

The buildings and equipment of the company were not perfect, but since that period they have, out of the net earnings of the road, constructed all the necessary buildings in a most substantial manner. The equipment has also been perfected, the debt cleared off, and eight per cent. regularly paid upon the preferred stock of the company.

Augusta and Waynesboro (Ga.) Railroad.

From the last report to the stockholders, we learn that the cost of this road has been:

For right of way.	\$10,946 02
For surveying and engineering.	39,769 62
For construction.	904,964 39
For interest.	109,056 96
For salaries and incidentals.	17,523 80
	\$1,082,260 79

Which have been derived from

Capital stock, 7,275 shares.	\$727,500 00
Bonds \$298,500 less \$17,216 68 interest and discount.	281,287 34
Earnings received from Central Railroad Co., to Jan., 1854.	34,327 89
Loans.	39,227 80
	\$1,082,343 03

The cost of the road is stated to have been \$19,381 per mile. Since its completion, it has been worked by the Central Railroad Company. Notice has been given by that company, however, that this arrangement will be discontinued after 1st January, 1856. The officers express the fullest confidence in the ultimate success of the work.

Mississippi, Gainesville and Tuscaloosa Railroad.

We learn that the original charter of this company has been amended, so as to authorise the construction of the road to Northport or Tuscaloosa, with right to increase capital; to cross, intersect, or connect with any other road; also to change the name of the company, and extend the line to Montevallo—if desired. Both amendments have been adopted by the Directors. An arrangement has been made with the Alabama and Noxubee Mississippi Railroad Company on reciprocal terms, by which the companies may use a common line for any distance below Northport and Tuscaloosa.

The report as to the feasibility of the route examined is highly satisfactory. The line will be about 185 miles long; and when completed, will form a valuable link between North and South Alabama.

The amount subscribed for local work in Sumpter county is \$141,000, and in Greene \$70,

400. No report had been received from Tuscaloosa county.

Proposals for grading &c., between the Mobile and Ohio railroad and the Bigbee river had been already invited, and that portion of the line passing through Greene county will soon be advertised.

At a meeting of the stockholders, held on the 22 ult., Jonathan Bliss, Esq., was unanimously re-elected President, Messrs. John C. Whitsitt, William M. Lewis, Greene B. Moble, Wm. L. McDowell, Israel C. Brown, Simeon Maxwell, Wm. Miller and Robert Craig, were at the same time elected Directors; John A. Minniece was chosen Secretary, and Amos Travis Treasurer.

Green Bay, Milwaukee, and Chicago Railroad Company.

This company was formerly called the "Wisconsin Lake Shore Railroad Company," having been chartered by the Legislature of that State to construct a road from Chicago, via Milwaukee to the head of Green Bay. The first Division from Chicago, of forty miles, is now open and trains are running regularly on it with the prospect of doing a large and profitable business. The Capital Stock of the whole line consists of 10,000 shares of \$100—\$1,000,000. In addition to which the company have issued First Mortgage Bonds at 8 per cent., to the amount of \$400,000, besides \$200,000 Second Mortgage 7 per cent. Bonds given as security to the city of Milwaukee for a loan of the same amount from that city. The road is very favorably located for business, traversing a populous and wealthy section of country, and occupying the shortest route between the termini, Chicago and Milwaukee, the largest and most rapidly growing cities in the North-west.

The following is a statement of the estimated receipts of the road when opened, for the first year, viz:

From through passengers.	\$350,400
" Way	65,700
" Freight (all kinds)	150,240
" Mails and Expresses	15,000
	\$581,340

Debt of the City of Albany, New York.

The principal debt of the city of Albany was a loan to the Western Railroad of Massachusetts, to assist in the construction of that work of \$1,000,000 at the rate of 6 per cent. for which bonds were issued payable as follows—

Dated.	Payable.
For \$300,000.... July 1st, 1840	July 1st, 1870
" 200,000.... " 1841	" 1871
" 250,000.... " 1842	" 1866
" 250,000.... " 1843	" 1881

The semi-annual interest and the bonds at maturity, to be paid by the road. A sinking fund has been established by the city, as security for the payment of the loan, from a tax on the property of the Western Railroad Company.

The direct public debt of the city, beside the above is \$1,342,616. Of this sum \$800,000 were borrowed to supply the city with water, at 6 per cent.; the bonds payable \$15,000 in 1870, \$285,000 in 1871, \$250,000 in 1876, and \$250,000 in 1881. To pay for the water bonds an appropriation of \$5,000 per annum is required by law to be set apart as a sinking fund. The bonds issued for the remainder of the above—\$542,616—are payable, part in each year from this time to 1876.

The rate of interest is 5 per cent. on \$150,000, and 6 per cent. on the balance, except \$3,100 which bear 7 per cent. To pay the above \$10,000 must be annually raised by tax, besides receipts from real estate sales.

Journal of Railroad Law.

STOLEN LUGGAGE.

There is a very growing tendency in the courts of most of our States to place proprietors of railroads, steamers, coaches, and the like in respect to luggage upon the ordinary footing of common carriers, who are a sort of insurers, and as such answerable for accidents and thefts in regard to the property entrusted to their care. And in the case of the Orange County Bank, the Supreme Court of this State, in 9th Wendell's Reports, held that a steamboat proprietor who carried passengers and their luggage, is responsible for the luggage if lost, although no distinct price be paid for its transportation. If the passengers unequivocally *consents* to assume the risk of luggage, the case is different.

Where the rigid rule above referred to is not adopted, the carrier is liable for losses occasioned by his fault, however slight.

In the U. S. District Court in New Orleans, a lady lately sued a steamboat proprietor for the loss of her gold watch, spectacles, and a small sum of money, which she had left in her state room, having previously locked the door.

The jury was of opinion that it was quite immaterial whether the luggage was stolen by one of the employees of the boat, or by a stranger—the fact that such a robbery had been committed proved negligence in managing the boat. The plaintiff accordingly recovered the value of the articles lost.

It is necessary, however, that passengers should themselves exercise due caution in regard to luggage of which they retain the supervision. A passenger left his over-coat on the seat of the car in which he was travelling, and on leaving the car he forgot to take it with him, and it was afterwards stolen. In this case the company was held to be exonerated from liability. They had agreed to safely transport the passenger and his luggage to a certain station. Having arrived there, their liability lasted no longer, the owner of the coat alighted and negligently left his luggage behind him. See *Tower vs. Utica and Schenectady Railroad Company*, 7 Hill 47.

RIGHTS AND LIABILITIES OF STOCK AND BONDHOLDERS IN RAILWAYS.

In addition to the propositions relating to this subject, which were last week laid down in this Journal, it may be observed that, in the State of New York, by the special provisions of the General Railroad Act, each stockholder of any Company formed under that act, is individually liable to any creditor of such company, to any amount equal to the amount unpaid on the stock held by him, for the company's debts, until his stock is paid up; and all stockholders of any such company are jointly and severally liable for debts for *labor*, after an execution therefor against the corporation shall have been returned unsatisfied in whole or in part.

And the term *labor* as above used has been decided to include not only those who labor personally, but all who do so by their servants or agents,

such as superintendents over those who have worked upon a road.

It is a grand privilege of the Common Law that the individual members of a joint stock corporation are not liable for corporate debts beyond their respective interests in the stock; and this rule of course prevails except, when modified by some special statutory provision.

It may be added in regard to the foreclosure of mortgages in this State, that unless otherwise specially ordered by the court, the judgment directs that the mortgagee's promises, or *so much thereof as may be sufficient to raise the amount due and which may be sold separately without material injury to the party interested*, be sold under the direction of the Sheriff or a legal Referee, and that the plaintiff or any other party may become a purchaser. If there be a surplus on such sale after paying the mortgage, the court will divide it among those who are equitably entitled.

Finances of Illinois.

The recent message of the Governor of Illinois gives the annexed statement of the debt of that State:

1853, January 1.	
Internal improvement debt, principal.....	\$5,771,950 74
Interest to January 1, 1855.....	3,579,561 87
Arrears of interest when debt was funded.....	2,023,629 12
Unfunded internal improvement scrip and bonds.....	\$397,480 00
Interest on January 1, 1855.....	333,883 20
Wiggins loan, principal and interest.....	181,000 00
Liquidation bonds.....	253,358 79
Interest two years to Jan. 1, 1855.....	30,403 05
	\$1,199,125 04
	\$11,574,275 78
Deduct amount of State indebtedness purchased to Jan. 1, 1853, and interest on same to Jan. 1, 1853.....	\$252,827 68
Amount paid on principal and interest to Jan. 1, 1853, and interest on principal taken up to Jan 1, 1855.....	1,228,000 00
	\$1,475,827 68
	10,098,448 10
Principal of canal debt, 4,886,522 83	
Interest on same Jan 1, 1855.....	2,959,681 96
	7,846,204 79
	17,944,652 89
Less amount of the two mill tax State debt fund.....	\$702,152 26
Less amount interest fund received into the Treasury from 1st Dec., 1852, to 1st Dec., 1854.....	500,645 56
Less amount from ordinary revenue to pay interest on liquidation bonds.....	20,648 71
Less amount surplus revenue to purchase State indebtedness.....	137,063 82
Less amount of the fund received from sale of State land to purchase State in	

debtedness.....	280,894 06
Less amount paid by Board of Trustees of the Illinois and Michigan Canal, to fully liquidate the \$1,600,000 loan.....	526,008 79
Less amount that will be saved in purchasing State indebtedness at the market value with surplus and land fund received to Jan. 1, 1855.....	215,510 82
Less amount received for tolls on canals for the past two years, and for lands and lots sold, as well as amount received for land previously sold, and not paid for until within the past two years.....	1,477,128 94
	3,950,037 96
	\$13,994,614 93

This table shows that, besides providing for the full interest on the debt, \$2,750,937 96 have been applied to arrearages of interest and principal, during the two years included in it. The Governor says:

"During the next two years I confidently expect that the amount, from all sources, derivable from the available assets of the State, and the revenue applicable to the liquidation of the State debt, will be increased at least twenty per cent.; which will render the calculation certain that the views entertained two years ago will be more than realized in ten years, instead of the eleven, and I might say still sooner, but prefer to give full time. The past two years have realized over \$750,037 96, more than enough to meet the calculation, that the debt would be paid, all but \$74,080 62, in eleven years."

In regard to the Illinois Central Road, he says:

"Your attention is particularly directed to the Illinois Central Railroad, as one with which the interests of the State are more immediately identified. I refer to its progress with very great satisfaction, and am confident its interests could hardly have been entrusted to a class of men of greater energy, or more regardful of the rights and interests of the State. By the terms of the charter, the State will commence to receive the amount of 7 per cent. on the gross receipts of the main trunk of the road, that is, from Cairo to La Salle, on the 24th day of March next; and two years from the 24th of March next the State will begin to receive 7 per cent. upon the gross receipts of the branches thereof, unless sooner finished, at which time the payment of the 7 per cent. is by the law bound to be made. I think it would be safe to calculate a net revenue from the main trunk of this road for the first year, from March 24th next, at \$50,000. The history of the world can hardly furnish an instance of a work of equal length and magnitude, which has progressed with so little parade and achieved equal results. There has been a very natural apprehension in the public mind that the company would retard the growth and interests of the State by long holding their lands from market. This apprehension has already been answered by the offer of nearly all the land at their disposal, on terms so liberal to the actual settler as to insure the immediate settlement of a great extent of country. A wise, steady policy, such as has thus far marked the course of the company, while it is well calculated to advance their permanent interest, cannot fail of producing the most favorable influences upon the minds of the people. Col. Mason, the Chief Engineer of this road, has comprehended the interests of the company as well as the State, and pushed forward this work with wonderful ability and energy. The whole business seems to have

been reduced to a system, and faithfully carried out by those in his charge.

The estimated cost of this road, including equipment, is \$20,000,000. Amount already expended 17,000,000

Yet to be expended \$3,000,000

Length of main line completed 308 miles
Galena branch 146 miles
Of which are finished 129 miles

Yet to be finished 17 miles
Length of Chicago branch 250 miles
Of which are completed 150 miles

Unfinished 100 miles
Making completed 587 miles
And unfinished 117 miles

"The amount to do on the Galena branch will be done by the 1st of April next, if the weather continues good for work during the winter, and the Chicago branch some time during the summer of 1855. This road has now 184 locomotives finished, 46 passenger cars, and 1,154 freight cars.

"Preemption claims allowed on company's land, 97,103.25 acres. Cash received on same to 30th November, \$242,758 12. Sale of mortgage lands to 30th November, 26,654.46 acres. Cash received on same, \$24,283 95. Total amount of sales \$298,318 14.

"Average price for which the above lands were sold, per acre, is \$10 88. Large amounts are now selling daily, and in nearly all cases to actual settlers. This road penetrates the best part of Illinois, and will cause rapid settlement on its line."

The number of miles of railroad opened on the 1st January, 1855, the Governor states to have been 1887; besides 847 in progress, which will be finished in two years.

Debt of the Consolidated City of Philadelphia.

Below is a statement of the debt of the consolidated city of Philadelphia, and the dates at which the same is payable. It all bears an interest at the rate of 6 per cent. It embraces, of course, the debts of the various municipalities or corporations which now compose the city. Up to a recent date what was termed, *Philadelphia* was the aggregate of numerous distinct and independent political organizations, the city proper containing only 126,000 people while the aggregate population exceeded 400,000. A considerable portion of the above debt was contracted in aid of railroads.

Redeemable:

Jan. 1, 1855	\$152,550 00
July 1, 1855	107,678 00
	260,228 00
Jan. 1, 1856	\$159,150 00
July 1, 1856	41,368 75
	200,518 75
Jan. 1, 1857	\$101,557 30
July 1, 1857	52,100 00
	153,657 30
Jan. 1, 1858	\$114,950 00
July 1, 1858	56,078 26
	171,028 26
Jan. 1, 1859	\$75,895 20
July 1, 1859	19,820 80
	115,216 00
Jan. 1, 1860	\$1,063,430 65
July 1, 1860	164,293 55
	1,227,724 20
Jan. 1, 1861	\$255,673 16
July 1, 1861	16,700 00
	272,373 16
Jan. 1, 1862	\$100,800 00
July 1, 1862	55,796 49
	156,196 49

Jan. 1, 1863	\$173,943 00
July 1, 1863	103,815 00
	277,758 00
Jan. 1, 1864	\$104,320 00
July 1, 1864	83,140 00
	187,460 00
Jan. 1, 1865	\$109,140 00
July 1, 1865	392,337 47
	501,477 47
Jan. 1, 1866	\$14,500 00
July 1, 1866	94,872 32
	109,370 32
Jan. 1, 1867	\$199,506 28
July 1, 1867	50,920 75
	250,427 03
Jan. 1, 1868	\$185,454 04
July 1, 1868	155,327 39
	240,781 42
Jan. 1, 1869	\$107,146 15
July 1, 1869	2,880 20
	110,026 35
Jan. 1, 1870	\$254,391 25
July 1, 1870	25,128 35
	279,519 60
Jan. 1, 1871	\$305,094 06
July 1, 1871	28,750 00
	333,844 06
Jan. 1, 1872	\$244,732 33
July 1, 1872	14,300 00
	259,032 33
Jan. 1, 1873	\$611,389 53
July 1, 1873	31,400 00
	642,789 53
Jan. 1, 1874	\$198,961 70
July 1, 1874	100 00
	199,061 70
Jan. 1, 1875	\$133,000 00
Juty 1, 1875	8,500 00
	141,500 00
Jan. 1, 1876	\$167,903 76
July 1, 1876	288,754 50
	456,658 26
Jan. 1, 1877	\$54,376 00
Jaly 1, 1877	253,500 00
	307,876 00
Jan. 1, 1878	\$108,031 45
July 1, 1878	221,800 00
	329,831 45
Jan. 1, 1879	\$47,700 00
July 1, 1879	250,000 00
	297,700 00
Jan. 1, 1880	\$608,292 29
July 1, 1880	227,400 00
	835,692 29
Jan. 1, 1881	\$663,120 64
July 1, 1881	340,000 00
	1,003,120 64
Jan. 1, 1882	\$46,400 00
July 1, 1882	528,652 33
	575,052 33
Jan. 1, 1883	\$22,501 10
July 1, 1883	252,000 00
	264,501 10
Jan. 1, 1884	\$1,012,600 00
July 1, 1884	348,800 00
	1,261,400 00
Jan. 1, 1885	\$83,850 00
July 1, 1885	158,000 00
	247,850 00
Jan. 1, 1886	
July 1, 1887	
July 1, 1888	
Jan. 1, 1889	\$764,200 00
July 1, 1889	250,000 00
	1,014,200 00
Jan. 1, 1890	\$500,000 00
July 1, 1890	250,000 00
	750,000 00
Jan. 1, 1891	
Jan. 1, 1892	
Jan. 1, 1893	\$170,000 00
July 1, 1893	21,072 61
	200,072 61
Jan. 1, 1894	
Jan. 1, 1904	
	7,500 00
	45,202 23
	\$15,697,455 73

Railroads in Georgia.

Below is a list of officers of several railroads in Georgia, recently elected for the present year.

Central Railroad and Banking Company.

R. R. Cuyler.

John W. Anderson.

Thomas Purse.

W. Crabtree.

Andrew Low.

L. O. Reynolds.

John R. Wilder.

J. B. Gallie.

J. W. Webster.

Mr. Cuyler was re-elected President of the Company.

Augusta and Waynesboro Road.

A. R. Lawton.

J. P. Screven.

John Stoddard.

J. C. Poythress, of Burke county.

R. A. Allen.

F. T. Willis, of Savannah.

R. H. Gardiner Jr., of Augusta.

Dr. F. T. Willis was elected President and Secretary of the company.

Savannah, Albany and Gulf Road.

J. P. Screven.

H. D. Weed.

John Stoddard.

Hiram Roberts.

Chas. Green.

Wm. Duncan.

G. W. Walther, of Liberty county.

Ed. C. Anderson.

R. Wayne.

Solomon Cohen.

Wm. Battersby.

W. N. Habersham.

I. W. Morrel, of Savannah.

Providener and Worcester Railroad.

The report of this company made up to the 31st November last, has been received. The receipts for the preceding 12 months, are—

From Passengers \$147,888 42

" Freight 139,286 43

" Mails, &c. 4,742 68

\$291,417 53

being an increase of \$41,836 46 over those of the previous year. The expenditure for the same period has been :

For maintenance of way \$20,940 92

For repairs of machinery 20,371 88

For running expenses 84,091 48

For miscellaneous 45,121 49

\$170,525 77

Net earnings 120,891 77

From which deduct interest on bonds

&c. 16,590 23

\$104,301 53

The item charged as *Miscellaneous* includes repairs and other losses occasioned by an "accident" which, it will be remembered, occurred on the road on the 12th August last, resulting in the loss of 13 lives, besides the wounding of others, and serious damages to engines and cars. Except this unfortunate occurrence, the report states that the road has been operated for three years without any occurrence calculated to injure its reputation.

In consequence of the expenses incurred by the construction of a double track, additional motive power, and station accommodations, the stockholders at their last annual meeting, authorized the creation of 925 shares of new stock. Owing, however to the state of the money market, only 243 of these have been sold, yielding \$24,300. The balance (682 shares) is still on hand awaiting

a more favorable opportunity for disposal, and the earnings of next year are consequently anticipated to some extent, in the declaring of the present dividend.

The general account for the year stands as follows:

Balance in the Treasury 30th Nov., 1853.....	\$39,711 38
Net earnings for the year.....	104,301 53
Cash receipts for stock.....	24,800 00

\$168,812 91

Of which there have been expended	
For construction.....	\$46,088 33
For rolling stock.....	28,489 25
For dividends.....	87,450 00

\$162,027 58

Leaving a balance on hand of... 6,285 33

The following statement shows the condition of the company at date of report, viz:

Capital stock 15,500 shares.....	\$1,550,000 00
Bonds due August, 1860.....	300,000 00
Dividend payable 3d January, 1855.....	46,500 00

\$1,896,500 00

Cost of road.....	\$1,598,624 43
Machinery.....	198,874 80
Unsold stock and property on hand.....	98,215 44
Cash on deposit.....	6,285 33

\$1,896,500 00

Proposals for Rails.

It will be observed by the advertisement in another column, that the Norfolk and Petersburg Railroad Company invite proposals for nine thousand tons of rail. Propositions for both compound and single patterns are requested, and we would remind those interested in improved patterns, that the present is a good opportunity to introduce them to public notice, and have their merits put to a practical test. The company deserve great credit for thus seasonably advertising for proposals, and while they will thus secure the best pattern offered, they will doubtless be the means of introducing some greatly improved style of rail. At least, we hope such will be the result.

At all events, here is a chance to contract for nine thousand tons of iron.

Lexington and Danville Railroad.

It appears that this company have had considerable difficulty with the contractors in getting the road completed. Two successive parties to whom it had been let had abandoned the work, both being largely indebted to the company, the former over twelve, and the latter, above thirty-one thousand dollars. Above \$200,000 have been paid on that portion of the road between Lexington and Nicholasville, 18½ miles in length. To complete this section, about \$46,750 more would be required. From Nicholas to Kentucky river, 5½ miles, there had been expended, for all purposes, \$95,887. The engineer estimates that less than \$40,000 will be sufficient to complete this division. The road crosses the Kentucky river by a wire suspension bridge 275 feet above the surface of the river at low water mark.

To construct the work, the people of Fayette county had voted to tax themselves \$200,000, to which the people of Lexington and the county had added \$50,000 by private subscription. The county of Jessamine had also voted to appropriate \$75,000 cash payable in one, two, and three years.

Much is expected from this road in reducing the price of coal, both in and out of the limits of the State. To the counties of Jessamine, Fayette, and Bourbon, it is estimated that the saving on the transportation of coal alone would be \$90,000 per annum.

Erie Loan.

We have only time to state in our present number, that the taking of the late loan of this company has been announced—a most gratifying fact, and one calculated to exert a most favorable influence upon the money market.

Railroad Lettings.

We invite the attention of contractors to the notice of lettings by the Metropolitan Railroad company, to be found on another page.

Cumberland and Pennsylvania Railroad Company.

The Cumberland and Pennsylvania Railroad Company was formerly known as the Mount Savage Railroad, having been built a number of years since by the Mount Savage Iron Company, from their works to Cumberland, a distance of about nine miles. In January, 1854, it was chartered as a separate company and extended to Frostburg, the centre of the famous Cumberland Coal region, making it 18½ miles long.

At Cumberland it connects with the Baltimore and Ohio Railroad, and also, by a canal, with the Chesapeake and Ohio Canal. The principal business is the transportation of coal, and 75,000 tons were transported in 1850, since which it has been steadily increasing to 234,000 tons in 1854, and 210,000 in the last three-quarters of 1854, the first three months having been rendered unproductive by a strike among the miners.

From Frostburg to Cumberland the descent is about 1,100 feet, so that little motive power is needed except to return empty cars to the mines.

The business must gradually increase in amount every year, and especially when the large tracts of the fourteen feet vein, owned by Messrs. Aspinwall, Conrad and others, in the valley of George's Creek, are opened, and a connection formed with the road, which can be done at small cost. We understand that this will soon be accomplished. The capital stock is all paid up in full, and the company has no indebtedness of any kind.

The Directors are John A. Graham, (President,) Mount Savage, Maryland, Warren Delano, Jr., and J. B. Varnum, of New York, John F. Winslow of Troy, and John M. Forbes of Boston.

EDDY'S Patent Car Locomotive and Tender Wheels.

GEORGE W. EDDY of Waterford, New York, is prepared to execute orders to any extent for his well known and fully tested double plate and solid Hub, Wheels, fitted to axles as required. Wheels of this pattern have been in general use for eight (8) years by the various railroad companies throughout the United States and Canada as well as on many roads in Great Britain. In the manufacture of their wheels they undergo no annealing process which gives them a deeper and harder chill than those of any other manufacture.

21st W. F. SHATTUCK, G¹ Ag't, 229 Broadway, N.Y.

Railroad Iron Wanted.

THE Undersigned invites proposals till the 27th day of February next, for the supply of about nine (9) thousand tons of heavy iron, for the "Norfolk and Petersburg Railroad."

Delivery to be made at Norfolk, Virginia, between the first of November next and the middle of June following, and at the rate of twelve (12) hundred tons per month.

It is contemplated to use Latrobe's three-part (compound) rail, and bids are solicited, based upon a supply of it and of the U pattern also.

WILLIAM MAHONE,
Chief Eng'r N. & P. R. R. Co.
Engineer Office, NORFOLK, Jan'y 1, 1855.

Railroad Iron.

CONTRACTS for Rails, at a fixed price or on commission delivered at an English port, or at a port in United States will be made by the undersigned.

THEODORE DEHON,
10 Wall st., near Broadway, New York.
500 tons T rails on hand 54 to 57 lbs. per linear yard. 1.6m

DIVIDEND NOTICE.

The Semi-Annual Interest falling due in this city on the first day of January, 1855, on the following named securities, will be paid on and after Tuesday, the 2d proximo, at the office of the undersigned on presentation of the proper coupons, viz:

The Bonds of the State of Indiana for Banking purposes, issued in 1854, being the \$1,300,000 loan, 5 per cent.

The Bonds of the City of Pittsburgh, Pa., issued to the Pittsburgh and Connellsville Railroad Co., 6 per cent.

The Bonds of the City of Alleghany, Pa., issued to the Ohio and Pennsylvania Railroad Co., 6 per cent.

The Bonds of the City of Chillicothe, Ohio, issued to the Marietta and Cincinnati Railroad Co., 7 per cent.

The Bonds of the City of Wheeling, Va., issued to the Marietta and Cincinnati Railroad Company 6 per cent.

The Bonds of the City of New Albany, Ind., issued to the New Albany and Salem Railroad Co., 7 per cent.

The Bonds of the Town of Harmer, Ohio, issued to the Marietta and Cincinnati Railroad Co., 7 per cent.

The Bonds of the City of Covington, Ky., issued to the Covington and Lexington Railroad Co., 6 per cent.

The Bonds of Franklin County, Ohio, issued to the Cleveland, Columbus and Cincinnati Railroad Company.

The Bonds of Franklin County, Ohio, issued to the Columbus and Xenia Railroad Company, 7 per cent.

The Bonds of Greene County, Ohio, issued to the Columbus and Xenia Railroad Company, 7 per cent.

The Bonds of Stark County, issued to the Ohio and Pennsylvania Railroad Company, 6 per cent.

The Bonds of Richland County, Ohio, issued to the Ohio and Pennsylvania Railroad Company, 6 per cent.

The Bonds of Alleghany County, Pa., special loan of \$75,000, 6 per cent.

The Bonds of Alleghany County, Pa., issued to the Pittsburgh and Connellsville Railroad Company, 6 per cent.

Ross County (Ohio) Bonds, issued to the Marietta and Cincinnati Railroad Co., 7 per cent.

Athens County (Ohio) Bonds, issued to the Marietta and Cincinnati Railroad Company, 7 per cent.

Washington County (Ohio) Bonds, issued to the Marietta and Cincinnati Railroad Company, 7 per cent.

Van Wert County (Ohio) Bonds, issued to the Ohio and Indiana Railroad Co., 7 per cent.

Allen County (Indiana) Bonds, issued to the Ohio and Indiana Railroad Co., 7 per cent.

Crawford County (Ohio) Bonds, issued to the Ohio and Indiana Railroad Company, 6 per cent.

The Ohio and Pennsylvania Railroad Company,
Mortgage Bonds, 7 per cent.

The Marietta and Cincinnati Railroad Co., 1st
Mortgage Bonds, 7 per cent.

Fort Wayne and Chicago Railroad Co., 1st
Mortgage Bonds, 7 per cent.

WINSLOW, LANIER & CO., 52 Wall st.

New York, December 29, 1854.

DIVIDEND NOTICE.

The Semi-Annual Interest falling due on the 1st of January, 1855, on the First Mortgage Bonds of the Dayton and Michigan Railroad Company will be paid on and after that date at the Banking Office of WINSLOW, LANIER & CO., 52 Wall st., New York.

HENRY S. MAYO, Treasurer,
Dayton and Michigan R. R. Co.

Dated Troy, December 20th, 1854.

DIVIDEND NOTICE.

The Semi-Annual Interest falling due on the 1st of January, 1855, on the First Mortgage Bonds, and the Real Estate Bonds (special mortgage) of the Bellefontaine and Indiana Railroad Company will be paid on and after that date at the Banking Office of WINSLOW, LANIER & CO., No. 52 Wall st., New York.

JAS. H. GOODMAN, President,
Bellefontaine and Indiana Railroad Co.
Dated Marion, O., December 20th, 1854.

DIVIDEND NOTICE.

The Semi-Annual Interest falling due on the 1st January, 1855, on the First Mortgage Bonds of the Indianapolis and Bellefontaine Railroad Company, will be paid on and after that date, at the Banking Office of WINSLOW, LANIER & CO., 52 Wall st., New York.

THOS. H. SHARP,
Treasurer Indianapolis & Bellefontaine R. R. Co.
Dated Indianapolis, Ind., December 20, 1854.

VIRGINIA
Locomotive and Car Manufacturing Company,
ALEXANDRIA, VA.

T. PERKINS, Pres't. R. C. SMITH, Treas'r.
MANUFACTURE LOCOMOTIVE ENGINES, CARS
OF EVERY DESCRIPTION, STATIONARY EN-
GINES & BOILERS, CHILLED CAR WHEELS AND
AXLES.

BUFFALO CAR COMPANY.

THIS Company having now completed their extensive Car Works are filling orders for the construction of PASSENGER, BOX, BAGGAGE, PLATFORM and CATTLE CARS of the most approved style and finish. The works have connection with the various lines of railway east and west, which gives them all required facilities for the delivery of cars in every direction.

Orders are respectfully solicited, address to the
BUFFALO CAR COMPANY,
Office 37 Pearl st., Buffalo, N. Y.

To Land Claimants in Texas.

IF you have any business relation to Lands in Texas address
W. B. STAUT, Clarkville, Red River County, Texas, and it
will be attended to promptly.

Lithography.

G. WEISSENBORN, Civil Engineer and draughtsman 113 Fulton St. up stairs; also gives his attention to the engraving of maps, and machinery on stone. Locomotives are neatly lithographed at this establishment on the most reasonable terms.—Orders are solicited.

50 ft

Railroad Iron.

500 TONS No. 1 Glengarnock Scotch Pig Iron in lots to suit purchasers for sale by

NAYLOR & CO.,

99 and 101 John st.

N. B.—The above Iron constantly imported 32 ft.

Notice to Contractors.

OFFICE OF METROPOLITAN RAILROAD CO.,
Georgetown, D. C., Dec. 26, 1854.

SEALED PROPOSALS for the grading, masonry, and bridging of forty-three and a half (43 1/2) miles of this road will be received at the office of the company until three o'clock p. m. on the 15th day of February next.

The maps, profiles, plans, and specifications will be ready for inspection on and after the 5th day of February.

The Metropolitan Railroad is designed to extend from the cities of Washington and Georgetown to the Balt. & Ohio R. R. by an easy and direct route, connecting with the latter road east of the "Point of Rocks," on the Potomac river, and making a saving of distance on the first ninety miles of the present travelled route from the Capital to the Western and Northwestern States of forty-five miles.

Proceeding from the point of intersection with the Baltimore and Ohio Railroad the route extends to the city of Frederick, and passing through the richest agricultural districts of Maryland, terminates in the city of Hagerstown, where it connects with the lines of railroad now in operation extending to Harrisburg, the Pennsylvania Railroad, &c.

The portion of the road for which proposals are now invited extends, from the westerly line of the District of Columbia (3 1/4 miles from Georgetown) to the city of Frederick.

Proposals will be received for the work in sections of one mile each, or for the entire distance of 43 1/2 miles.

The work is generally of a medium character for this part of the country, with some heavy cutting (in earth and rock) and bridging; and every facility exists for prosecuting it vigorously and with economy at all seasons of the year. The country is elevated and rolling, well watered, and remarkably healthy.

The time conditioned for the completion of the contracts, will be from one to two years.

Any further information desired by persons proposing for the work will be furnished at the office, or may be had by addressing the President of the company by letter prior to the day of letting.

By order of the Board of Directors

FRANCIS DODGE, President.
EDMUND FRENCH, Chief Engineer.

Dec 29 2awtFeb 5.

OFFICE OF THE CLEVEL'D, COLUM. & CIN. R. R. CO.
CLEVELAND, December 13, 1854.

DIVIDEND NOTICE.—A Cash Dividend of Five per cent. on the capital stock of this company from the net earnings of the Road for the six months, ending 31st inst., has been declared, payable in conformity with the by-laws of the Company, on the 20th day of January next.

Stockholders registered on the New York books will be paid at the Office of Messrs. Winslow, Lanier & Co., No. 52 Wall st.

Transfer books will close from the evening of the 31st inst. to the 10th of January, inclusive.—By order of the Board of Directors.

T. P. HANDY, Treasurer

Railroad Iron.

THE Undersigned, having made arrangements abroad, are prepared to contract for the delivery of Foreign rails, or of approved brands upon the most favorable terms.

They will also make contracts for American rails, made at their Trenton Works, from Andover Iron, in whole or in part, as may be agreed upon.

They are prepared to furnish Telegraph, Spring and Market Wire; Braziers and Wife Rods; Rivets and Merchants Bars to order, all made exclusively from Andover Iron. The attention of parties who require Iron of the *very best* quality for special purposes, is respectfully invited.

COOPER & HEWETT
February 15, 1850.
17 Burling Slip, New York

A Good Machine Draftsman,

WELL acquainted with the arrangements and details of locomotives, wishes a situation in a Locomotive Works or Railroad Shop. Has given considerable attention to the burning of Anthracite Coal, and can produce undoubted testimonials as to character and qualifications. For further information address Box No. 1116 Philadelphia P. O.

Ontario, Simcoe & Huron R.R.

CANADA.

THIS road opened in May last to Lake Simcoe is expected to be completed to the Georgian Bay, Lake Huron a distance of 96 miles in June next where it will form the shortest and most agreeable route to the North Western States to Lake Michigan and to the Mineral Regions of Lake Superior.

At present the Passenger Trains leave Toronto for Barrie (64 miles) daily at 8 a.m. and 3.30 p.m., returning the same day—On the opening of the navigation a Steamer will ply on Lake Simcoe in connexion with the Trains and will convey passengers through that Lake and Lake Coniching to Orillia whence a short portage of eighteen miles will take them to the waters of Lake Huron to the Steamer (Kaloohah) which runs to the Sault St. Marie and intermediate ports forming the most expeditious and agreeable route to the Mineral Regions of Lakes Huron and Superior.

Arrangements will be made on the completion of the road to the Georgian Bay for a line of first class Steamers to extend their trips to the ports on Lake Michigan.

ALFRED BRUNEL,
Superintendent.

NEW YORK STATE CANALS.—NOTICE TO CONTRACTORS.—In pursuance of a resolution of the Contracting Board, notice is hereby given, that sealed proposals will be received by the undersigned for the construction and completion of the work upon the several Canals of this State, described in the following tabular statement at the times and places therein mentioned:

CHAMPLAIN CANAL.

Sealed proposals will be received at the Canal Commissioner's Office, in the city of Albany, until the 20th day of December, 1854, at 9 o'clock A.M., for the following described work, to wit:

Penalty When to be completed.
Description of the work. in bond.
Three combined locks, towing path bridge and necessary section work to bring the same into use, located at Waterford \$18,000. April 1st, 1856

ENLARGEMENT OF THE ERIE CANAL—MIDDLE DIVISION.

Sealed proposals will be received at the Engineer's Office in the city of Syracuse, until the 21st day of December next, at 9 o'clock in the forenoon, for the following described work, to wit:

Description of work.	Amount of penalty in bond.	Time of completion.
Section 157	\$1,200.	April 1st, 1855.
" 189	2,300..	" "
" 190	4,000..	" "
" 191	4,700..	" "
" 192	7,200..	" "
" 193	8,600..	" "
" 194	8,700..	" "
Culverts on sections No. 189 to 197, inclusive	2,800..	" "
Road and farm bridge abutments on sections No. 189 to 198, inclusive	8,100..	" "
Road and farm bridge abutments on sections No. 194 to 197, inclusive	2,300..	" "
Putnam Brook waste weir on section No. 192	900..	" "

ENLARGEMENT OF THE OSWEGO CANAL.

Sealed proposals will be received at the Engineer's Office in the village of Fulton, until the 22d day of December next at 9 o'clock in the forenoon, for the following described work, to wit:

Section 5	Liverp'l	\$9,000.	April 15, 1857.
" 6	Level.	6,000..	" "
" 7 & 8		8,000..	" "
" 18		8,900..	" "
" 19	Phoenix	7,000..	" "
" 20	Level.	7,000..	" "
" 21		6,000..	" "
Culverts on sections 5 & 6	2,500..	" "	" "
" 18, 19, and 21	2,500..	" "	" "
Bridge at Phoenix	800..	July 1st, 1856.	" "
Lengthening guard lock 2.	400..	April 15,	" "
Bridge at Oswego	1,000..	" "	" "

ENLARGEMENT OF THE CAYUGA AND

SENECA CANAL.

Sealed proposals will be received at the Engineer's Office, in the village of Albion, until Wednesday, the 27th day of December next, at 9 o'clock a. m., for the following described work, to wit:—

Section 232 with penalty in bond of.....\$3,700
 " 233 " " " 5,400
 " 234 " " " 7,600
 " 235 " " " 4,500
 " 236 " " " 5,400
 " 237 " " " 4,600
 " 238 " " " 6,500
 " 239 " " " 8,300
 " 241 " " " 6,100
 " 242 " " " 4,300
 " 243 " " " 8,800
 " 244 " " " 2,000
 " 285 " " " 8,000
 " 286 " " " 7,000
 " 287 " " " 6,000
 " 290 " " " 9,200
 " 291 " " " 8,100
 " 292 " " " 8,000
 " 293 " " " 7,500
 " 294 " " " 8,400
 " 295 " " " 6,200
 " 296 " " " 7,300
 " 297 " " " 6,500
 " 298 " " " 6,700
 " 310 " " " 3,000
 " 311 " " " 6,700
 " 312 " " " 6,800
 " 313 " " " 10,000
 " 314 " " " 7,300
 " 315 " " " 8,500

Culverts on Sections 232 to 244.....2,300
 " 285 to 298.....8,000
 " 310 to 315.....5,000

Mud Creek Aqueduct.....5,500
 Bridge Abutments on Sections 232 to 244.....5,700
 " 285 to 298.....7,000
 " 311 to 315.....3,100

Waste Weir on Section 313.....500
 Section 232 to 244, both inclusive, with the Culverts and Bridge Abutments on said Sections, to be completed by April 1st, 1857. The remainder of said work to be completed by the 1st day of April, 1856.

All propositions must be for a sum certain, as to the price to be paid or received, for each and every kind of work; and no proposition not thus defined will be received or acted upon; and no proposition will be considered complete unless a price for every kind of work included in such proposition is distinctly and plainly inserted.

Every proposal shall be accompanied by an affidavit, endorsed thereon, of each person uniting in such proposal, that he is not directly or indirectly interested in any other proposal for the same work or materials, or any part of the same; that he has no agreement or understanding with any other person to become interested in any other proposal or contract for the same work or materials, or any part thereof; and that no other person than such as shall be named in the proposal is interested in the same, or has any agreement or understanding to become interested in any contract that may be made in pursuance of such proposal.

Every proposal for work or materials embraced in the above statements shall be accompanied with a bond to the people of this State, in the penalty specified opposite each kind of work in said statement, and which bond shall be signed by the party making such proposal and two or more responsible sureties, with such evidence of their responsibility as the contracting board shall require, and which sureties shall justify in sums equal in the aggregate to twice the amount of such penalty.

Each proposal must be accompanied by the certificate of the Supervisor of the town, and the County Clerk, or the County Judge of the county in which said surety shall reside, or any two of them, as to the responsibility of said sureties.

The persons to whom the work may be awarded will be required by the contracting board to give the bond for the payment of laborers' wages, as required by chapter 278, of the laws of 1850.

No acceptance of a proposal or award of a contract by the contracting board, and no contract made by the said board, or any interest in the same, shall be assignable to any person or persons, without the written consent of the Canal Commissioners.

Fifteen per cent. of the amount of any work done or materials furnished, at the contract price thereof, shall be reserved by the Canal Commissioner until the whole work, which is the subject of the contract, shall be fully and entirely completed.

In case the contracting board shall be of opinion that the proposals made at any meeting thereof, pursuant to any advertisement, are, in consequence of any combination or otherwise, excessive and disadvantageous to the State, they may decline all the said proposals, and advertise anew for the work and materials embraced therein.

Contractors will be required to receive and use in the work all such materials as have been previously procured and delivered for any of the above work, and allow such prices therefor as may be exhibited at the several offices prior to the letting.

The prices in the contract will be considered as including the expense of furnishing all the materials, and performing all the work, according to the plans, specifications and notices exhibited at the letting.

The persons to whom the work may be awarded, will be required to enter into contract for the performance of the work within ten days after the same shall have been awarded to them, upon the terms prescribed by the contracting board.

The name or names of the persons proposing, must be written out in full, with their places of residence.

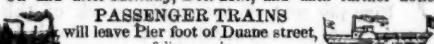
The maps, plans, specifications, quantities of materials, propositions, blank contracts and bonds will be ready for examination at the several places specified in this notice, ten days previous to the time specified for the several lettings.

Dated at ALBANY, November 29th, 1854.

HENRY FITZHUGH,
 FREDERICK FOLLET, } Canal Comm'r.
 CORNELIUS GARDINER, }
 JAMES M. COOK, Comptroller.
 JOHN T. CLARK, State Eng. and Surveyor.

New York and Erie R. R.

On and after Monday, Dec. 25th, and until further notice

PASSENGER TRAINS
 will leave Pier foot of Duane street,  as follows, viz:—

BUFFALO EXPRESS, at 7 a.m. for Buffalo.

DUNKIRK EXPRESS, at 7 a.m. for Dunkirk.

MAIL, at 8 1/2 a.m. for Dunkirk and Buffalo, and intermediate stations.—Passengers by this train will remain over night at any station between Binghamton and Corning, and proceed the next morning.

WAY PASSENGER, at 4 p.m., via Suffern for Piermont and intermediate stations.

NEWBURGH EXPRESS, at 4 p.m. for Newburgh.

WAY PASSENGER, at 4 p.m., for Otisville, and intermediate stations.

NIGHT EXPRESS, at 5 p.m. for Dunkirk and Buffalo.

EMIGRANT, at 5 p.m., for Dunkirk and Buffalo and intermediate stations.

On Sundays only one Express Train—at 5 p.m.

These Express Trains connect at Elmira, with the Elmira & Niagara Falls Railroad, for Niagara Falls, at Buffalo and Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.

47 ft. D. C. McCALLUM, General Sup't.

Locomotives for Sale.

THE Subscriber offers for sale the following Locomotives and Tenders, suited for a 5 feet gauge.

One very superior 18 ton Passenger Engine. Driving Wheels.

5 1/2 feet diameter with 8 wheel tender.

One very superior 16 ton Freight Engine. Driving Wheels.

4 feet diameter with 8 wheel Tender.

The above machines are from one of the best shops in the country, built and finished in the best manner, and can be delivered in ten days from receipt of order. To any company in want of such machines, these are recommended.

For Price, terms, &c., apply to THOS. M. CASH,
 Philadelphia Railway Agency.
 No. 80 South Fourth st.

49 ft. PHILADELPHIA.

Notice to Contractors.

EUROPEAN & NORTH AMERICAN R. R.

NEW BRUNSWICK.

Contract for Sleepers or Cross Ties.

WANTED 100,000 Haemetae or Cedar Sleepers to be delivered in equal proportions at the Port of St. John and the Bend of the Petitcodiac River on or before 1st of August next.

The Ties to be sound and straight, nine feet long, ten inches by six inches, with a hewn surface top and bottom of not less than eight inches.

Parties desirous of tendering for the above or any portion of them are requested to send in their prices to the undersigned at his office, St. John, on or before the 25th December, 1854.

W. E. ROSE.

ST. JOHN, Nov., 1854.

47 ft.

For Sale.

BY the Baltimore and Ohio Railroad Company, 24 crate cars adapted to railroad purpose, which will be sold at a reasonable price. For further information, apply to

SAMUEL J. HAYES,
 M. of M. Baltimore and Ohio R. R. Co.,
 BRIDGES & BRO.,
 84 Courtland st., New York.

Philadelphia, Wilmington & Baltimore Railroad.

UNITED STATES MAIL ROUTE TO THE SOUTH AND WEST.

Trains will leave the Southern and Western Station, corner of Broad and Prince streets, Philadelphia, at 8 30 am. 12 45, 3 and 11 pm.

FARE BY THROUGH TICKETS TO THE SOUTH.

From New York to Wilmington.....	\$15 50
do do Norfolk.....	8 50
From Philadelphia to Wilmington.....	14 00
do do Norfolk.....	6 50
do do Petersburg.....	9 00
do do Richmond.....	8 00

FARE BY THROUGH TICKETS TO THE WEST.

From New York to Cincinnati.....	\$13 50
do do Louisville.....	14 50
From Philadelphia to Cincinnati.....	11 00
do do Louisville.....	12 00
From New York to Indianapolis.....	16 00

An extra charge will be made for meals and state rooms on board the boats.

S. L. SPAFFORD,

General Sup't.

Faggotted Car and Engine Axles

FORGED BY RANSTEAD, DEARBORN & CO., BOSTON, Mass.

These Axles are drawn from the faggot entirely by the hammer, and are all warranted.

Welded Wrought Iron Tubes.

THE subscribers having lately added to their Cumberland Nail and Iron Works an establishment for making Wrought Iron Tubes, are now prepared to supply the trade with tubes two to twelve feet in length, furnished with screws and ferrules on their ends, of the following sizes—inside diameter, $\frac{1}{2}$, $\frac{3}{4}$, $\frac{5}{8}$, $\frac{7}{8}$, $\frac{9}{16}$, $\frac{11}{16}$, $\frac{13}{16}$ and 2 inches, Warranted and fully proved, equal to the best Pipes manufactured.

All orders addressed to us will receive prompt attention, and liberal discounts from the list of prices will be allowed to the trade.

REEVES, BUCK & Co.,
 No. 45 North Water Street, Philadelphia,
 July 13, 1854. 28.6m.

RAILROAD CAR GREASE.

James Bayes & Co.,

6 MINOR STREET,

PHILADELPHIA.

MANUFACTURERS OF

SOFT WHITE GREASE,

For Coal and Freight Cars, Heavy Machinery, etc., etc.

STIFF WHITE GREASE,

For Water-Wheel Gudgeons, Heavy Bearings, Rollers on Inclined Planes, OMNIBUSES, WAGONS, AND OTHER CARRIAGES, In Cans, Kegs, and Barrels.

SUPERIOR YELLOW GREASE,

For Passenger Cars, etc., etc.

THE above different kinds of Grease, having been in use for some time past on several Railroads in the United States, can be confidently recommended for their general usefulness and economy.

49 ft. SAMPLES FORWARDED UPON APPLICATION.

For Sale.

A STATIONARY Engine having cylinders 18 inches bore and 20 inches stroke, complete in all respects and finished in the best manner. Has been in use about six months.

ROGERS, KETCHUM & GROSVENOR,
Paterson, New Jersey,
jul.14 294f.] or 74 Broadway, New York.

The Lowell Machine Shop

CONTINUES to manufacture to order, FREIGHT and PASSENGER LOCOMOTIVES of different classes, with the most modern improvements,

also MACHINISTS' TOOLS, especially adapted to Railroad Repair Shops, and to the construction of machinery generally. These Tools are of the most approved construction and consist in part of Engine Lathes, Hand Lathes, Vertical Drilling Lathes, and Planers of various sizes and lengths, Compound Planers, Shaping Machines, Slotting Machines, Bolt and Nut Machines, Gear Cutting Engines, Chuck, Compound Slide Rests, Machines for boring Crank Pin Holes in Locomotive driving wheels, Trip hammers, &c., &c.

COTTON MACHINERY of all descriptions, BOILERS, SHAFTING and MILL WORK, CASTINGS, and all work usually done in Machine Shops and Foundries.

WILLIAM A. BURKE, Sup't, Lowell, Mass.

J. T. STEVENSON, Treasurer, 5 Tremont st. Boston.

**Boiler and Tank Rivets,
Nuts and Washers;
All Sizes of
Bolts and Bolt Ends**

for Sale by
BRIDGES & BROTHER,
64 Courtland st., N. Y.

NEW YORK AND ERIE RAILROAD LOAN.—The Committee appointed to report in regard to the financial affairs of the New York and Erie Railroad Company, beg leave to recommend:

That the Company advertise for sealed proposals, to be opened on the 10th of January next, for the purchase of \$4,000,000 7 per cent. Bonds, redeemable in twenty years, with interest, coupons payable 1st February and 1st August.

And that for the purpose of gradually reducing the debt of the Company, the New York and Erie Railroad Company pledge themselves in said Bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of the United States Trust Company of the city of New York to be by them invested, as well as all accruing interest, in the bonds of the NEW YORK AND ERIE RAILROAD COMPANY of the present issue, as long as they can be purchased at or under par; and whenever the bonds of the new issue cannot be purchased at or under par, then the said trustees shall invest the said monthly payments and the accruing interest in any bonds of the NEW YORK AND ERIE RAILROAD COMPANY which can be purchased at or under par. And that whenever the said Bonds of the new issue cannot be purchased at or under par, then the said Trustees to invest the said monthly payments and the accruing interest in any Bonds of the New York and Erie Railroad Company which can be purchased at or under par.

And whenever it shall be impossible to purchase any of the Bonds of the New York and Erie Railroad Company at or under par, then the said Trustees shall invest the said monthly payments and all accruing interest in such Bonds of the New York and Erie Railroad Company as can be purchased at the lowest rate.

And all Bonds on being purchased by said Trustees shall be canceled by writing or printing on the face "Held by the Sinking Fund of the New York and Erie Railroad Company," but that the interest warrants on said canceled Bonds shall be collected by said Trustees, as they become due, until the monthly payments of the New York and Erie Railroad Company and the accruing interest or the conversion of convertible Bonds into Stock of this Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in said Trustees shall be closed, and all canceled bonds and the unpaid interest warrants delivered to the NEW YORK AND ERIE RAILROAD COMPANY.

And the Committee would further recommend that the Board of Directors adopt the following resolutions:

Whereas, The period has arrived when it is expedient and necessary to close the construction account of this Company, to be reopened only when the imperative necessity of the increasing the road, and the state of the finances

of the Company will render it perfectly evident that it is proper and justifiable to reopen it, so as to increase the present capacity of the Road.—Therefore

Resolved, That any and all future expenditures beyond the amount to be derived from the proceeds of the new loan, after reimbursing the Income Bonds due 1st February next, be charged to transportation expenses.

Resolved, That as often as the Bonds purchased by the Sinking Fund amount to 10 per cent. on the Capital Stock, this Company will, upon receiving due authority from the Legislature of this State, declare at the next semi-annual dividend day a stock dividend of 10 per cent.

Resolved, That the resolutions be published in the daily papers, so that the public have cognizance of the future policy of the Company.

(Signed.)

CHARLES MORAN.	Special
SHEPHERD KNAPP.	Finance
WILLIAM E. DODGE.	Committee.
NELSON ROBINSON,	
GEORGE F. TALMAN.	

NEW YORK, Oct. 21, 1854.

Sealed proposals will be received at the office of the NEW YORK AND ERIE RAILROAD COMPANY in the City of New York, until the 10th of January, 1855, for the purchase of \$4,000,000 of the bonds of the Company, bearing 7 per cent. interest payable semi-annually on the 1st day of February and August, redeemable in twenty years.

The NEW YORK AND ERIE RAILROAD COMPANY pledge themselves in said bonds to pay monthly, commencing on the 1st of March next, the sum of thirty-five thousand dollars into the hands of the United States Trust Company of the city of New York to be by them invested, as well as all accruing interest, in the bonds of the NEW YORK AND ERIE RAILROAD COMPANY of the present issue, as long as they can be purchased at or under par; and whenever the bonds of the new issue cannot be purchased at or under par, then the said trustees shall invest the said monthly payments and the accruing interest in any bonds of the NEW YORK AND ERIE RAILROAD COMPANY which can be purchased at or under par. And whenever it shall be impossible to purchase any of the bonds of the NEW YORK AND ERIE RAILROAD COMPANY at or under par, then the said trustees shall invest the said monthly payments and the accruing interest, in such bonds of the NEW YORK AND ERIE RAILROAD COMPANY as can be purchased at the lowest rates. And all bonds when purchased by the said trustees shall be cancelled by writing or printing on their face: "Held by the Sinking Fund of the NEW YORK AND ERIE RAILROAD COMPANY;" but the coupons on such cancelled bonds shall be collected by said trustees as they become due, until the monthly payments of the NEW YORK AND ERIE RAILROAD COMPANY, and the accruing interests, or the conversion of convertible bonds into stock of the Company, shall have reduced the entire debt of the Company to \$20,000,000. After which the said monthly payments shall cease, and the trust vested in such Trustees shall be closed, and all cancelled bonds and the unpaid interest warrants delivered to the NEW YORK AND ERIE RAILROAD COMPANY.

The successful bidders will be required to pay 10 per cent. in cash on the notice of the acceptance of their bids; 20 per cent. on the 20th of January; 30 per cent. 1st February; 20 per cent. 15th February, and the balance on the 1st of March.

The Income Bonds of the NEW YORK AND ERIE RAILROAD COMPANY will be received in part payment at par, and the accrued interest till day of surrender to the Company.

The Directors of the NEW YORK AND ERIE RAILROAD COMPANY, in offering the present loan to the public beg leave to state that it will be amply sufficient to pay the Income Bonds redeemable on the 1st February next, and the entire present floating debt of the Company, as well

as to complete all the unfinished work now under way.

By a resolution of the Board of Directors, all future outlays of every kind beyond the proceeds of the present loan, will be charged to expense account, and paid from the income of the Company, after payment of the interest on the funded debt, and the monthly payment to the Sinking Fund.

After the negotiation of the present loan and the redemption of the Income Bonds, the position of the Company will be—

Stock	\$10,024,000
Bonds of 1867, First Mortgage	3,000,000
Bonds of 1859, Second Mortgage	4,000,000
Bonds of 1883, Third Mortgage	6,000,000
Bonds of 1862, Convertible	3,500,000
Bonds of 1871, Convertible	4,351,000
Bonds of 1875, present loan	4,000,000

Total \$24,875,000

In the opinion of the Directors it is perfectly safe to estimate the gross earnings of the Road, for the coming year, at \$6,000,000, from which must be deducted:

Expenses 55 per cent.	\$3,300,000
Seven per cent. on debt \$24,875,000	1,739,570
Sinking Fund 420,000	

\$5,459,57

Net revenue equal to over 5 per cent.

on stock applicable to cash dividends

and contingencies 540,430

The Directors of the Company are confident these estimates will be fully realized. The gross receipts since the Road has been in operation to Dunkirk, have been for passengers and freight alone—1851 to 1852 \$3,047,748 INCREASE. 1852 to 1853 4,138,424 \$1,690,676, say 354 per cent. 1853 to 1854 5,122,666 984,242, say 233 per cent.

The business of the road depending mainly on the local traffic, must inevitably increase in the same ratio as the population of the Counties through which it passes. In the opinion of the Superintendent, Mr. McCollum, the road in its present position and with its present equipment, can earn \$8,000,000. If the future increase in the receipts be estimated at only 15 per cent. per annum, which is not much over one-half of the average increase of the past the above utmost capacity of the road will be tested in 1858.

As to the running expenses, as they were only 534 per cent. in 1853 and 1854, there is every probability that with rigid economy and an increase in the traffic, they can be reduced to 50 per cent. but they have been estimated at 55 per cent., so as to leave ample margin for contingencies.

The effect of the monthly purchases by the Trustees, of the Bonds of the present issue on their market value, cannot fail to be immediate, and will insure to the original purchasers a certain profit within a moderate time; for whilst the amount outstanding will decrease each month, the absorption by the Sinking Fund will constantly increase by the accruing interest on the Bonds in the hands of the Trustees. In 8½ years the Sinking Fund will absorb \$4,763,053, estimating all the purchases of bonds by the Sinking Fund to be made at par. That the Company will be in a condition to make promptly the monthly payments to the Sinking Fund, no one at all acquainted with the income of the Company can doubt for a moment. All the past difficulties of the Company have arisen from the necessity of contracting for expenditures, before securing the requisite funds to meet them. This is now entirely at an end, whilst the daily increasing revenue of the Company must inevitably increase the market value of its Bonds, as well as of its Stock, the latter of which will no doubt ere long take rank among the most solid investment stocks.

Proposals should be endorsed "Proposals for New York and Erie Railroad Loan," and addressed to DANIEL DREW, Treasurer, Erie-place.

HOMER RAMSDELL, President.

NATHANIEL MARSH, Secretary.

New York, Oct. 23, 1854.

SEPTIMUS NORRIS,

CIVIL MECHANICAL & CONSULTING ENGINEER
OFFERS his services to Railroad Companies and Engineers, to provide them with Plans and Proportions of Locomotives for burning coal or wood; calling the attention of Engineers and Railroad Managers to his New Patent Boiler for burning Anthracite Coal; also Plans for Depot Buildings, Railroad Tools, and all kinds of Machinery appertaining to Railroads; he will also superintend personally the construction and building of any Locomotives they may order, in this or any other city, so as to insure the Companies receiving good machines and faithful workmanship.

Having been engaged for many years professionally as Engineers upon many of our most important Roads, in their Location, Building and Equipment, and for the last 20 years practically engaged in the Manufacture of Locomotives, feels satisfied, he can save the Companies who may think proper to engage his services, many dollars, and loss by receiving imperfect machines, which have been built and put together hastily.

Address to No. 28 Summer st., Philadelphia.

NUGENT'S COLLEGE

OF
ENGINEERS AND MECHANICS,
Public Square, Cleveland, Ohio.
E. NUGENT, C. E., Principal.

THE design of this Institution is to afford young men an opportunity of acquiring a knowledge of the profession of Civil Engineering, and to Mechanics and Tradesmen a sound theoretical and practical knowledge of Mathematics, Architectural and Mechanical Drafting, Plain and Ornamental Penmanship, &c.

For further particulars address the Principal.

PHILADELPHIA RAILWAY AGENCY

AND
General Furnishing Depot
OF ALL ARTICLES REQUIRED BY
RAILROAD COMPANIES,
No. 90 South Fourth street,
PHILADELPHIA.

Railroad Chairs,
Railroad Spikes,
Car Wheels,
Car Axles,
Boiler and Tank Rivets,
Bolts, Nuts, Washers,
Car Lanterns and Lamps,
Conductors' Lanterns,
Car Findings &c., &c.,

Engineers' Lanterns,
Locomotive Head Lights,
Car and Switch Locks,
Jack Screws, Vises,
Patent Oil Cans,
Steam Gauges,
Steam Whistles,
Spring Balances,

ALL orders promptly filled at manufacturers' prices and forwarded with despatch. Particular attention paid to contracting for Locomotives, Cars, Railroad Iron, &c.

The subscriber being Agent for several manufacturers of Machinists' Tools is enabled to furnish Railroad Companies with Lathes, Planing Machines, Drills, &c., of the best quality at manufacturers' prices.—Orders solicited

60 ly

THOS. M. CASH.

LOCOMOTIVE FOR SALE.

A NEW Engine built in the best manner and of the best materials is offered for sale at our Works at Paterson, New Jersey. The following is a brief description:

Cylinders—18 inches, with 22 inch stroke.
Drivers—four in number, 5 feet in diameter.
Gauge—4 feet 8 1/2 inches.
Boiler—of best Penna. Iron with 120—1 1/2 inch Tubes, 10 1/2 feet long.

Fire box—36x6x48 inches.

Tank—to contain 1500 Gals.

This Engine was built for a road which is unable to pay for it and will be sold low.—Apply personally or by letter to

JAMES JACKSON, President,
NEW JERSEY LOCOMOTIVE MACHINE CO.,
50 ft Paterson, N. J.

SEYMOUR, MORTON & CO.,

GENERAL RAILROAD AGENCY,
Office, Metropolitan Bank Building, No. 110 Broadway.

HAVE to dispose of at private sale, in amounts to suit persons desiring to invest, the following valuable Securities:

LOUISVILLE CITY BONDS, at 36 years.

OHIO AND MISSISSIPPI R. R. STOCK, drawing interest.

MAYSVILLE AND LEXINGTON MORTGAGE BONDS, at 24 years.

MAYSVILLE AND LEXINGTON R. R. STOCK.

SCIOTO AND HOCKING VALLEY R. R. STOCK.

SCIOTO AND HOCKING VALLEY R. R. FIRST MORTGAGE CONVERTIBLE BONDS.

LOUISVILLE AND NASHVILLE R. R. STOCK.

BUFFALO AND STATE LINE R. R. BONDS.

They are prepared to negotiate contracts for the construction and equipment of railroads in any part of the country, including furnishing corps of engineers and contractors, locomotive engines and cars, railroad bridges, McCallum's Patent, railroad iron, chairs, pikes, switch irons, &c., &c.

Hammitt's Patent Reclining Car Seat

for Night or Day Travelling.

THE subscriber, having been appointed sole agent for the sale of this Seat, begs to call the attention of Railroad Officers to this valuable improvement for comfort in Railroad Travelling. They can now be furnished at about the same cost as the ordinary car seat, and with the manufacturer's present arrangement, they occupy but little more space in the car.

THOS. M. CASH,
No. 90 South Fourth st., PHILADELPHIA.

49 Gms

ENGINEERS.

Atkinson, T. C.,
Mining and Civil Engineer,
Alexandria, Va.

Barnes, Oliver W.,
Chief Eng. Pittsburg and Connellsville R.R. Co., Pittsburg, Pa.

Edward Boyle,
Chief Engineer, 2d, 3d, and 9th Avenue Railroads New York
Office 123 Chambers st.

Clement, Wm. H.,
Little Miami Railroad, Cincinnati, Ohio.

Cozzens, W. H.,
Engineer and Surveyor, St. Louis, Mo.

Alfred W. Craven,
Chief Engineer Croton Aqueduct, New York.

Charles W. Copeland,
Steam Marine and Railway Engineer,
64 Broadway, New York.

Davidson, M. O.,
Civil and Mining Engineer, Cumberland, Md.

C. Floyd-Jones.,
Division Engineer 3d and 12th Divisions,
ILLINOIS CENTRAL RAILROAD,
Vandalia, Ill.

Gay, Edward F.,
Civil Engineer, Philadelphia, Pa.

Gilbert, Wm. B.,
Syracuse and Binghamton Railroad, Syracuse, N.Y.

Gzowski, Mr.,
St. Lawrence & Atlantic Railroad, Montreal, Canada.

Grant, James H.,
New Orleans and Nashville R.R., Aberdeen, Miss.

Holcomb, F. P.,
Chief Eng. Augusta and Waynesboro, and Savannah and Pensacola Railroads, Marthasville, Macon Co., Ga.

S. W. Hill,
Mining Engineer and Surveyor, Eagle River,
Lake Superior.

Huger, T. P.,
Northeastern Railroad, Charleston, S. C.

D. Mitchell, Jr.,
Chief Engineer Pittsburgh and Steubenville, and Chartiers Valley Railroads, Pittsburg, Pa.

Samuel Mc Elroy,
Assistant Engineer, New York Navy Yard.

Mills, John B., Civil Engineer,
Sackets Harbor and Saratoga R. R., 24 William St., N. Y.

Miller, J. F.,
Buffalo and Connocton Valley Railroad, Avon, N. Y.

Morris, Ellwood,
Engineer and Agent DAUPHIN & SUSQUEHANNA CO.,
Cold Spring, Lebanon Co., Pennsylvania.

Septimus Norris,
Civil and Mechanical Engineer, Philadelphia.

Sam'l. & G. H. Nott,
Civil Engineers, No. 6 Niles' Building, Change Avenue, Boston.

Osborne, Richard B.,
Civil Engineer, Office 78 South 4th st., Philadelphia.

Pritchard, M. B.,
East Tenn. and Georgia Railroad, Knoxville, Tenn.

W. Milnor Roberts,
Chief Engineer Alleghany Valley Railroad, Pittsburgh, Pa.

Shanly, Walter,
Chief Engineer Bytown and Prescott Railway,
Prescott, Canada.

Roberts, Solomon W.,
Ohio and Pennsylvania Railroad, Pittsburgh, Pa.

Sanford, C. O.,
South Side Railroad, Virginia.

Schlatter, Charles L.,
Civil Engineer, Ogdensburg, N. Y.

Straughan, J. R.,
Ohio and Indiana Railroad, Bucyrus, Ohio.

Steele, J. Dutton,
Pottstown, Pa.

Charles B. Stuart,
Civil Engineer, New York.

Edward W. Serrell,
Civil Engineer, 157 Broadway, New York.

P. J. Tournadre,
Chief Engineer Vicksburg, Shreveport and Texas R.R.,
Vicksburg, Miss.

Trautwine, John C.,
Civil Engineer and Architect, Philadelphia.

Troost, Lewis,
Alabama and Tennessee Railroad, Selma, Ala.

A. B. Warford,
Chief Engineer Susquehanna Railroad, Harrisburg Pa.

Whipple, S.,
Civil Engineer and Bridge Builder, Albany, N. Y.

Wm. J. Young
HAS removed his Engineering and Surveying Instrument Manufactory to No. 33. North Seventh Street, Philadelphia.

BUSINESS CARDS.

Railroad Instruments.

THEODOLITES, TRANSIT COMPASSES AND LEVELS
on a new principle, with Fraunhofer's Munich Glasses, Surveyors' Compasses, Barometers, Chains, Drawing Instruments, etc., all of the best quality and workmanship, for sale at unusually low prices by

E. & G. W. BLUNT,
No. 179 Water street,
New York, Dec. 1, 1851.

James Herron, Civil Engineer,
OF THE UNITED STATES NAVY YARD,
PENSACOLA, FLORIDA.,
PATENTEE OF THE

HERRON RAILWAY TRACK
Models of this Track, on the most improved plan may be seen at the Engineer's office of the New York & Erie Railroad.

W. G. ATKINSON,
MINING ENGINEER, SURVEYOR AND DRAFTSMAN
CUMBERLAND, MARYLAND,
Will attend to business in his Profession in the Coal Region and vicinity.

Jerry Cowles, Esq., New York.
Col. Wm. Young, do.
Jas. W. McCulloch, Esq., late U. S. Treas., Washington.
June 26, 1853.

To Engineers, Architects and Draughtsmen.

THE undersigned begs respectfully to inform Gentlemen in the above professions, that he has constantly on hand a great variety of instruments for Field and Office use.

JAS. PRENTICE,
1 Chamber street, New York.

Gas Fixtures.

FIXTURES for Burning Gas for Lighting Public Buildings
Private Dwellings, Stores and Factories, manufactured by
the subscriber in great variety. Orders by Mail, or left at the
Factory on Causeway street, will be promptly attended to.

HENRY N. HOOPER & CO.
Boston, March 28, 1850.

H. SAWYER

(of the late firm of SAWYER & HOBBY),
Manufacturer of Transits and Levels,
HAS removed to Union Place near Warburton Av., Yonkers.
N. Y.

J. S. Sewall,
CIVIL ENGINEER,
ST. PAUL MINESOTA.

Edge Tools.

THE Underhill Edge Tool Company manufacture from the best of Steel, and warrant every variety of Edge Tools for the New England, Southern and Western trade, including Axes, Adzes, Picks and Chisels; all of which are constantly kept on hand at their Warehouse, 53 Kilby street, Boston.

December 18, 1852. WM. S. SAMFSON, Agent.